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Digital media and women's issues in Egypt and Saudi Arabia

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A thesis submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy in Interdisciplinary Studies.

University of Warwick, Centre for Interdisciplinary Methodologies.

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Declaration

This thesis is submitted to the University of Warwick in support of my application for the degree of Doctor of Philosophy.

It has been composed by myself and has not been submitted in any previous application for any degree.

The work presented (including data generated and data analysis) was carried out by the author.

Parts of this thesis have been published by the author:

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Abstract

This thesis investigates how digital media participate in and contribute to the emergence and discussion of women's issues in Egypt and Saudi Arabia, in complex intersections of online and offline activity. Specific focus is placed on digital media's intrinsic complexity and agency,¹ and their interplay with socio-political, economic, legal, and cultural practices. I will specifically ask questions such as, how does an issue work through technological forms of development, and how is it techno-socio-political? How do digital media enrich, reshape, and co-constitute women's issues in Egypt and Saudi Arabia? In answering these questions, I explore how certain women's issues are formed, emerge, and become central in Egypt and Saudi Arabia.

These explorations involve a reflection on the computational turn of current cultural and social practices² and the significance of algorithms and software in the making of our socio-cultural realities. They also necessitate an understanding of the countries' locales, accounts of women's movements, struggles, and discourses that, inevitably, involve Islamic Tradition. Asking such questions also means exploring how online activities enrich current discourses of women and gender studies in a Middle Eastern context.

¹ Actant is here intended in Bruno Latour's sense of any performative entity that enters in relation with other, contributing to the emergence, establishment and constitution of a network. Latour, Bruno, "On actor-network theory. A few clarifications plus more than a few complications." In *Soziale Welt*, Vol. 47, 369-381, 1996.

² Goriunova, Olga. "The Force of Aesthetics, On Memes, Hacking and Subjectivity." *Zeitschrift für Medienwissenschaft*, 8 "Medienästhetik", 1/2013;

Goriunova, Olga. "Material Imagination: On the Avant-gardes, Time and Computation." Goriunova, Olga (ed). *Fun and Software. Exploring Pleasure, Paradox and Pain in Computing*, London: Bloomsbury, 2014, 257.

The resulting work sits in-between a number of disciplines and approaches and calls for a bespoke conceptual and methodological approach, built on a combination of methodologies, including close reading of history and literature on the topic, and qualitative and quantitative analysis of digital content through digital media tools. For this purpose I have employed software such as Gephi, Netvizz, and MOZ SERP. Moving beyond an understanding of media as a tool and construing them as constitutive parts of an entangled network made of heterogeneous actants, I introduce the concept of a multi-layered and networked map. This concept is a mode of investigation and a tool of analysis that seeks to understand and discuss the diverse and continuous transformations of certain women's issues in these two countries as they emerge and evolve online. The visualisations of the quantitative part of my analysis are published on the website that I have created, available at <http://www.oxycoms.com/clb>.

This thesis tries to find a location at the intersection of digital media, gender studies, and studies of the Middle East. At times, specific problematic aspects of each field are at odds with each other, and I attend to the ways in which they touch and contradict each other. Through the concept of the multi-layered and networked map I will trace and follow the intersection of theoretical thoughts, accounts of women's activities and movements, online activities, and findings of the new methodologies and tools of online social networking analysis. I will discuss how they combine and coalesce, bringing to life what I address as technowomen. I hope to contribute to the current theoretical and methodological discussions in digital media, media, and cultural studies, to discussions in women and gender studies on the digitised reality of movements and activities.

Introduction

The pervasiveness of technology underpinning much of current societal tasks has prompted new modes of analysis on the interplay of computation and cultural practices. Critical approaches and methods have engaged in reflections of “media ecologies,” or the “dynamic interrelation[s] of processes and objects, beings and things, patterns and matter.”³ Concurrently, contributions of feminists like Donna Haraway’s *cyborg* and Jodi Dean’s *cyberia* unfold questions of agency and gender in a technologically mediated world.⁴ In spite of the richness of these interrogations on the new challenges posed by technology, they do not seem to have permeated—as of yet—the vast array of works on Middle Eastern gender and women studies.⁵

This thesis therefore proposes an investigation of the digital emergence and transformation of a number of women’s issues in Egypt and Saudi Arabia. It will move between different fields of analysis, primarily digital media studies, and media theories that reflect on the relationship

³ Fuller, Matthew. *Media Ecologies: Materialist Energies in Art and Technoculture* Cambridge: MA, MIT Press, 2005, 2. Fibreculture Journal defined Fuller’s media ecological platforms as ranging “from network environments for philosophy and media activism as in Rekombinant (<http://www.rekombinant.org>) to art platforms on the net such as Runme.org (<http://runme.org/>)”. Gottard, Michael and Parikka, Jussi, “Editorial: Unnatural Ecologies.” *FibreCutulre Journal*, Issue 17, 2011. [Online]. Available at: http://fibreculturejournal.org/wp-content/pdfs/FC17_FullIssue.pdf. Last accessed, 21 March 2015.

⁴ Haraway, Donna. “A Cyborg Manifesto, Science, Technology, and Socialist-Feminism in the Late Twentieth Century.” Kaplan, David M. (ed). *Readings in Philosophy of Technology*, Oxford: Rowman & Littlefield Publishers, 2004, 161-178;

Dean, Jodi. “Feminism in Technoculture.” *Review of Education, Pedagogy, and Cultural Studies*, Vol. 23 Issue1, 23-47.

⁵ I recognise that women’s issues in these two countries do not solely pertain to the world of Islamic studies but the wealth of literary corpus focusing on Islam and women and the richness of the discussions with regards to the influence of Sunni doctrine in the two countries has led me to focus particularly on Islam.

between media and women's activism in the Middle East.⁶ The choice of Egypt and Saudi Arabia responds to the interest to understand the mechanisms through which women's issues, in these two culturally strong and influential Muslim countries, emerge and acquire new meanings through digital media.

The thesis' interest lies in tracing the multiple emergence and existence of a number of women's issues on the digital layer that comprises digital artifacts, fractional updates, and APIs and can extend to—as it will be shown in due course—translation of geographic coordinates into binary codes to pinpoint cases of violence against women, as well as many other elements and processes. However, such inquiry entails a deeper comprehension of the ways in which issues that can be found and emerge online are rooted in, and relate to, an Islamic tradition that characterises and influences both countries.

Since its early stages, this research has in fact recognised how an investigation of the digital lives of women's issues in Egypt and Saudi Arabia cannot prescind from debates, misunderstandings, and battles over women's roles and positions in the two countries. This aspect has required an attentive reading of literature, presented in chapters 2 and 3, that has helped trace the entanglements of the social, political, and economic fabric with a plethora of interpretations of the Qur'an, the saying and deeds of the Prophet (Ahdith), and Islamic jurisprudence. These entanglements also include the ways in which debates and women's movements have moved beyond geographic boundaries and emerged throughout the centuries in many different forms. I argue that these different aspects—which I will

⁶ Digital Media Studies is here intended as "the new identifying and trans-disciplinary model form of academic technology" dedicated to an understanding of how the digital has become part of our lives. In Stiegler Bernard, *Die Afklärung in the Age of Philosophical Engineering*, Keynote Speech, Worldwide International Conference, WW3, Lyon Convention Centre, Lyon FR, 20 April, 2012.

address as layers—inform and entangle with the digital lives of women's issues in these two countries.⁷

The challenging task of analysing digital media, women's activities, and activism in the context of Egypt and Saudi Arabia cannot neglect the two countries' contradictory political settings that waver between reforms and setbacks caused by traditionalist fervour. In addition, it must examine how media and digital media have both given hope to and disappointed academics and activists alike. Feminist scholar and activist Wendy Harcourt had, in the early days of widespread Internet usage, envisioned the potential for it to behave like a ventriloquist that could give rise to one collective voice, by acting as an empowering channel or means of communication.⁸ Harcourt's enthusiasm has been mirrored by early discussions on the impact of the Internet on women in a Middle Eastern context. As I will discuss in chapter 2, scholars such as Naomi Sakr or Fatima Mernissi discussed how new technologies could "empower" women "through self-expression" and envisioned the birth of "cosmo-civics."⁹

Although these arguments might seem to feed into what Jodi Dean addressed as the "cyberian imaginary [...] where all feminist fantasies of liberation from the constraints of gender [...] are realized,"¹⁰ they have nevertheless enriched the spectrum of reflections on the political potential of technologies in relation to feminist and development studies.

⁷ In spite of the strong Islamic influence, the role of Coptic women must be acknowledged, especially in relation to the spread of women's education through Christian schools in Egypt in the 19th century.

⁸ Harcourt, Wendy. "Cyborg Melody. An Introduction to Women on the Net (WoN)." Harcourt, Wendy (ed). *Women@Internet: Creating New Cultures in Cyberspace*, London: Zed Books, 1999. 1-20,

⁹ Mernissi, Fatima. *Karawan. Dal Deserto al Web*, Firenze: Giunti Editore, 2004, 17-19 and 176-227;

Sakr Naomi. *Women and the Media in the Middle East. Power Through Self-Expression*, London: IB Tauris, 2004.

¹⁰ Dean, Jodi. "Feminism in Technoculture." *Review of Education, Pedagogy, and Cultural Studies*, Vol. 23. No.1, 23-47, 31.

However, they also presuppose a dualistic and dichotomous interpretation that seeks to attest either women's ability to master technology and reach empowerment or technology's ability to offer an unconstrained space where new identities can be formed, as Dean suggests. As such, this dichotomy would not do justice to the complexities found in an analysis of the co-creation of women's issues through technology, specifically digital media. It is through nuanced complex exploration that this thesis wants to understand the relationship between digital media and the various women's issues that emerge in Egypt and Saudi Arabia.

From the very origins of this analysis, several key questions unfolded. How can women's issues in a technologically advanced world be understood? How complex does the concept of the issue become once digital cultures enter into the picture? What are women's issues and what meaning do they assume, and have they assumed, in digital media in relation to the specific locales of Egypt and Saudi Arabia? How are they transformed, altered, and become something new altogether when they interlace with technology?

As a result, this thesis investigates these questions without expecting to individually answer all of them—in so much as their exploration contributes to the development of this analysis. As Olga Goriunova highlights, current cultural forms and genres work computationally.¹¹ In other words, they depend and emerge, exist and form through the interactions of technicalities, existing in computational media and supported by algorithmic infrastructure.

¹¹ Goriunova, Olga. "The Force of Aesthetics, On Memes, Hacking and Subjectivity'." *Zeitschrift für Medienwissenschaft*, 8 "Medienästhetik", 1/2013.

There is a computational academic reflection in new media theory and especially in software studies on the interactions taking place when new forms of culture are forged through, and thanks to, technology. Fuller probes the “computers intrinsic embodied culture” and “hardwired epistemologies,”¹² interrogating the cultural impact of software. Nevertheless, feminist and gender studies focused on a Middle Eastern context have been slow in taking up the analysis of these changes.

This thesis therefore undertakes an active investigation of the complexity of women’s issues that cannot neglect or prescind from the specific configurations of software, Application Programming Interfaces (APIs), fractional updates, and algorithms. How do they contribute to the emergence and the very existence of some of the women’s issues? As highlighted since the early stages of this research, there is a necessity to contextualise what can be deemed an issue for women in the localities of these two countries. This necessity has inevitably brought me to frame the digital analysis of women’s issues within a dynamic and heterogeneous network. Such a network, as explained in chapter 1, is made up of political, social, and economic events and contexts, as well as the interplay between these and Islamic tradition that is very strong in both countries (as discussed in chapters 2 and 3).

As a consequence, the thesis sits in between different approaches and necessitates a bespoke methodological and conceptual approach, which I found through the concept of a multi-layered and networked map, the result of an exercise of tracing, relating, and connecting different situations, events, positions, and discussions on certain topics—with regard to

¹² Fuller, Matthew and Pope, Simon. “WARNING: This Computer Has Multiple Personality Disorder.” [Online, no page reference] < <http://www.altx.com/wordbombs/popefuller.html> >. Last accessed: 23 January 2015.

women's roles and positions—deemed relevant and problematic. Such a map should be imagined as tri-dimensional, multi-layered, and networked.

It is networked because it is made of many different, and heterogeneous, connected nodes. Such nodes could be events, documents, statements, technological artifacts, or political contingencies. It is multi-layered because I will trace how the issues that emerge belong to different 'spheres.' I have chosen to use the term *layer* following Deleuze and Guattari's conceptualisation of it as being complex, fluid, and articulated in other layers.¹³ The layers in the map this thesis traces enmesh into each other, making it difficult to understand any process of relation just in terms of cause and effect. I will also discuss how nodes can become networks and how a network can be made of entangled and connected nodes that belong, exist, or emerge on different layers. Therefore, the multi-layered and networked map will be used as a useful tool aimed at recognising and determining the complexity of women's issues and their multiplicity.

This thesis tries to find a space at the intersection of digital media theory, gender studies, and women's studies in Egypt and Saudi Arabia. It will be shown how these fields touch at many points, generating a situation where theoretical thought, new methodologies, and tools of digital analysis as well as lived realities combine and create the hybrid concept of *technowomen*. I choose to use technowomen as opposed to technowoman to maintain a fluid understanding of the multiplicity of women's issues. Woman, as pointed out by Monique Wittig, carries with it a taxonomic significance that neglects the multiplicity of women, and systematically expels diversity.¹⁴ Technowomen want to become useful tools of analysis

¹³Deleuze, Gilles and Guattari, Felix. *A thousand plateaus: capitalism and schizophrenia*, Minneapolis, MN: University of Minnesota Press, 2005, 48-51.

¹⁴ Wittig, Monique. "One Is Not Born a Woman." Abelove, Henry and Barale, Michele Aina and Halperine, David M. (eds). *The lesbian and gay studies reader*, London: Routledge, 1993, 103-109. The author refers in particular to gays, lesbian, transgender and changed-sex men and women. A critique

that aid and inform this research project. As it will be explained in chapter 1, technowomen emerge on the digital layer as an outcome of the intertwinement of human and non-human agency and are performative, contributing to the co-constitution of women's issues in Egypt and Saudi Arabia, enriching and expanding the multi-layered and networked map.

The interest on mapping connections as they take shape and exist online is not new to academic research; spatial analysis of online relations is a growing and compelling field, where academia, activist groups, and businesses alike continuously develop tools and methods of analysis. The map as well as technowomen want to help me investigate the processes and mechanisms through which several (at times diverse) elements enter in contact and generate a dense network of connections. They aim at surpassing a discussion on how women use digital media and bring to the fore a further discussion about the sociality of digital technologies and software, and propose a concept of agency as relational rather than just solely allocated in the subject.

New engagements with technology, the sociality of software, and the innovative ways of understanding agency as relational find space in Software Studies. Adrian Mackenzie maintains that agency is not allocated but distributed "between people, machines and contemporary symbolic environments"; this distribution is possible through binary code.¹⁵ It follows that digital technologies are now embedded in our everyday lives; a question of agency no longer sits with the subject but also with the technology itself. The growing role of code—stressed especially by Fuller's developments of the fields of software studies and computational culture—

to the conceptualisation and taxonomisation of the term woman also comes from post-colonial feminist and theorist Uma Narayan according to which the category of the woman excludes differences of race and ethnicity. Narayan, Uma. "Essence of Culture and a Sense of History: A Feminist Critique of Cultural Essentialism". *Hypathia*, Vol. 13, No. 2, 1998, 86-106.

¹⁵ Mackenzie, Adrian. *Cutting Code: Software and Sociality*, New York: Peter Lang, 2006, 19.

is generating a situation where almost everything is code-written, code-readable, and code-structured.

Agency is thus reframed as not solely emerging out of a political will to resist or oppose power, or out of the will of the individual to find a voice through means of communication (mass media and the Internet). It is related to the actant, or any object's ability to perform and contribute to the production of cultural and social practices. Algorithms, codes, and the "hidden stuff" of software cannot therefore be excluded in an analysis that takes into consideration concepts of participation, identity, crowd-sourcing, and peer production of new cultural practices.

The multi-layered map of women's issues in Egypt and Saudi Arabia will therefore include these elements, putting them on the "same ontological footing" of other actants.¹⁶ Social networking sites, the 'places' where women and men tend to express their views, won't be considered only in terms of usage but also in light of their inner computed organisation. They will therefore be considered actants that deserve the same attention of the people that decide to participate into the many platforms and tools made available through digital media. The cases discussed in this thesis will show how codes, APIs, and status updates are silent but performative actants that participate into a greater debate of gender, patriarchy, and women's issues.

It can be argued that technology and women have a common destiny, that of being torn between subject and object, form and essence, visibility and invisibility, and, to conclude, performance and being. Amina Wadud goes as far as defining women as subjects without agency, as to stress the humanity of the woman despite the complete lack of agency, exclusively

¹⁶ Harman, Graham. *Prince of Networks: Bruno Latour and Metaphysics*. Melbourne: re-press, 2009, 14.

granted to the subject (man).¹⁷ To further complicate the scenario, the topic of the Muslim woman is continually torn between patriarchy, easy stereotypes, and the “rescue narrative”¹⁸ of “saving the poor veiled women” from the “brown man,”¹⁹ a tactic mastered after 9/11 to justify occupations in Iraq and Afghanistan.

When the topic of women in Muslim countries such as Egypt and Saudi Arabia meets that of technology, everything that has to do with technology, be it fax machines, women’s magazines, blog posts, and audiocassettes, is often portrayed as revolutionary, empowering, and liberating, and blurring the public-private divide. Albrecht Hofheinz addresses these views as *nextopias*.²⁰ Although these points are very valuable and the advent of the Internet has significantly altered women’s lives in many developing countries, the subtle question of control over the Internet infrastructure surfaces, along with the problem of access and usage, elements that highly impact the way technology enacts technowomen.

¹⁷ Wadud, Amina. *Qur’an and Woman: re-reading the sacred text from a woman’s perspective*, Oxford: Oxford University Press, 1999, 29-44, 30.

¹⁸ Riley, Robin Lee. *Depicting the Veil: Trans-national sexism and the War*, London: Zed Books, 2013, 3.

¹⁹ Riley. *Depicting the Veil: Trans-national sexism and the War*, 4 and 5.

²⁰ Shirky, Clay. “How Social Media can make history.” *TED Talk*, June 2009. [Online]. Available at < http://www.ted.com/talks/clay_shirky_how_cellphones_twitter_facebook_can_make_history >. Last accessed 21 March 2015;

Shirky, Clay. “How Cognitive Surplus will change the world.” *TED Talk*, June 2010. [Online]. Available at < http://www.ted.com/talks/clay_shirky_how_cognitive_surplus_will_change_the_world >. Last accessed 21 March 2015;

Mernissi, Fatima. *Karawan. Dal Deserto al Web*, Firenze: Giunti Editore, 2004;

Sreberny, Annabelle and Khiabany, Gohlam. *Blogistan: The Internet and Politics in Iran*, London: IBTauris, 2011;

Hofheinz, Albrecht. “The Arab Spring. Nextopia? Beyond Revolution 2.0.” *International Journal of Communication*. 5 (2011): 18. [Online]. Available at: <http://ijoc.org/index.php/ijoc/article/view/1186/629>. Last accessed 21 March 2015.

As previously introduced, my idea of technowomen seeks to overcome the concept of usage of technology and agency as located in “those operations of power that re-signify and subvert norms”.²¹ Rather, the emphasis will be put on the ways in which technowomen in Egypt and Saudi Arabia are enacted, take shape, and emerge through technology. As a consequence, digital technologies will be conceived as an integral part and spatial extension of women’s issues in these countries in a way that contributes to the creation of new and multiple realities. As Karen Barad argued, in fact, technology “does not simply offer constraints on what we can see; [...] it helps us produce and is “part of” the body it images.”²²

Rather than looking into how women in Egypt and Saudi Arabia are empowered by the usage of technologies or how technologies shape the way societies behave in rather straightforward ways, the concept of technowomen proposes to overcome dualisms such as mind/body, rationality/irrationality, or subject/object, and relates instead to the concepts of issue, multiplicity, network, and multi-layered map.

These terms better respond to the need of a topological analysis of women’s issues in these two countries, where topology refers to the process of emergence through “distributed” and “dynamic co-configurations of practices” that organise “forms of social life” [...].²³ An analysis of women’s issues in Egypt and Saudi Arabia in the spirit of topology can be intended as “the continuous translation without break or rupture of one thing [...] into

²¹ Mahmoud, Saba. *The Politics of Piety: the Islamic revival and the feminist subject*, Woodstock, UK: Princeton University Press, 2005, 21-22.

²² Barad, Karen. "Getting Real: Technoscientific Practices and the Materialization of Reality." *Differences: A Journal of Feminist Cultural Studies*, Vol. 10, No. 2, (2008), 87-128, 101.

²³ Lury, Celia, Parisi, Luciana and Terranova, Tiziana. "Introduction: The Becoming Topological of Culture." *Theory, Culture and Society*, Issue 29, 2012, 3-35, 5.

something else distinctive [...]” or, the way in which we can “read depth from a surface; project distance from a sign; deduce existential truths from the barest of information; and derive our sense of the present from the past.”²⁴

The set of core terms such as issue, network, multiplicity, layer, and multi-layered map will be repeatedly traced and explained in due course; they will intersect at many points, and it is therefore necessary to introduce them one by one, given their complexity; they are taken from the world of technology, digital media studies, cultural theory, social theory, and map design.

Issue and Agency

The term issue will be used in this thesis to point at the dynamic generation of “matters that matter,”²⁵ or the process through which something emerges and becomes relevant and worth addressing.

The use of this term is inspired by a variety of reflections comprising Bruno Latour’s “matter of concern,” Annemarie Mol’s multiplicity, software studies’ reflections on software and redistribution of agency, and Noortje Marres’ attempt to identify the centrality of the issue in a digitally mediated world.²⁶

²⁴ Murphy, Peter. “Topeme: Truth. Topology. Cartography. Ana|logy.” Paper presented at *The Hydra Project: Morphology, topology, and artifice: cartographical aesthetics and an architecture of the event*. The Royal Danish Academy of Fine Arts Schools of Architecture, Design and Conservation Study Department, 22-23 May 2014. Available at <<http://www.karch.dk/hydra/Materiale/Myrphyabstract>>.

²⁵ Latour, Bruno. “Why has Critique Run out of Steam? From Matters of Fact to Matters of Concern.” *Critical Inquiry* - Special issue on the Future of Critique. Vol 30 No 2, Winter 2004, 225-248, 232.

²⁶ Latour, Bruno. ‘Why has Critique Run out of Steam? From matters of fact to matters of concern’;

Latour highlights how technical objects can assume relevance in social matters.²⁷ Along with Actor Network Theory (ANT), which he co-founded, Latour proposes to follow actants, or anything human and non-human able to act.²⁸ The loss of distinction between human and non-human, object and subject—the latter one seen as the only one able to act—leads us to understand what is at stake, or the issue that “generates a different pattern of emotions and disruptions, of disagreement and agreement.”²⁹

Acknowledging the issue helps recognise the relevance of the fluid interaction between actants, technical or human, that belong to apparently different fields such as science, technology, and humanities. Latour has also proposed another term, DingPolitik, or the politics of the ‘thing.’ DingPolitik is an ironic proposition, and it has been interpreted—to the end of this thesis—as an invitation to think of technology and women’s issues as a complex and entangled network of human and non-human interactions; technology is not only to be understood as sharing platforms where social

Mol, Annemarie. *The Body Multiple: Ontology in Medical Practice*, London: Duke University Press, 2002.

Mackenzie, Adrian. *Cutting Code: Software and Sociality*, New York: Peter Lang, 2006.

Marres, Noortje. *No issue, no public: democratic deficits after the displacement of politics*, PhD dissertation Universiteit Van Amsterdam Press, 2005.

²⁷ Latour, Bruno. *The Pasteurisation of France*, Cambridge: MA, Harvard University Press, 1988;

Latour, Bruno. *Aramis. Or the Love of Technology*, Cambridge: MA, Harvard University Press, 1996;

Latour, Bruno. “From RealPolitik to DingPolitik. Or How to Make Things Public.” Latour, Bruno and Weibel, Peter (eds). *Making Things Public: Atmosphere of Democracy. Catalogue of the ZMK Show*, Cambridge: MA, MIT Press, 2005.

²⁸ In *Politics of Nature* Latour defines an actans as anything that can “[...] modify other actors” through a series of actions, trials and experiments. Latour, Bruno. *Politics of Nature: how to bring the sciences into democracy*, Cambridge, MA: Harvard University Press, 2004, 75.

²⁹ Latour, Bruno. “From RealPolitik to DingPolitik. Or How to Make Things Public.”, 5.

interactions happen but also as part of the depth and hidden—and intrinsically social—aspect of software.³⁰

Although it is in fact possible to trace larger entities such as women's organisations and their work of networking and advocacy that have embraced the Internet and digital media (especially Social Networking Sites), the spontaneity of crowdsourcing, the temporary association around Facebook pages, and the short-lived campaigns and petitions that take life on Twitter cannot be explained if not employing an understanding of the relations that make technologies—and as a consequence technowomen—actants, or anything that acts and is worth following in its establishment of networks of relations.³¹

As a consequence, rather than sitting within a debate based on understanding and defining how women use technology for their empowerment or how technology empowers women, I will focus on the ways in which some issues emerge, on and through digital technology, and how various actants participate into their co-constitution.

Working definition of women's issues

All of these reflections feed into my own interpretation and investigation of women's issues and the way in which I refer to such issues. Since the 1970s, 'women's issues' has been used as an umbrella-term, to cover different sets of problems women face around the globe. 'Women's issues', like 'civil society,' has been used to designate how movements and

³⁰ Marino, Mark. "Matthew Fuller in conversation with Mark Marino." *E-media studies*, Vol.3 Issue 1, 2013. [Online]. Available at <http://journals.dartmouth.edu/cgi-bin/WebObjects/Journals.woa/xmlpage/4/article/429>. Last accessed 19 November 2014.

³¹ Latour, Bruno. "How to Better Register Agency." *Yale Tanner Lecture*, 26 March 2014. [Online], Available at <http://www.bruno-latour.fr/node/562>. Last accessed 21 March 2015.

organisations tackle specific problems, advocate, and champion their rights to different forms of empowerment. Mary Ann Fay uses the term “woman question” to refer to the “complex social, cultural, and political phenomenon that had at its centre the issue of women’s place in society.”³² The woman question, Fay argues, was at the centre of debates of nation building, modernisation of societal practices, and—moving into the peculiarity of the countries I have taken into analysis—respect of Islamic mores in a Middle Eastern context. Additionally, Fay seeks to categorise (or cluster) women’s issues, focusing on women’s movements’ and organisations’ activities and mobilisation to champion specific rights such as access to education, right to vote, and work outside the home. These, for the scholar, are issues central to women’s activism and should therefore be considered women’s issues. However, looking at the specificity of Egypt, it could be argued that activists and intellectuals such as Qasim Amin and Jamil Sidqi al-Zahawi “equated women’s liberation with an end of veiling, seclusion and polygyny.”³³ Barbara Freyer Stowasser instead highlights the central role of women’s issues in an Islamic and post-colonial discourse that “symbolize the main aspects of the Islamic struggle for the maintenance of indigenous values and cultural authenticity.”³⁴ Women’s roles and positions in fact became key indicators of Islamic identity and helped react to Western influence, colonisation, and its legacy. Women’s issues have been seen as a bastion of Islamic identity and resistance. I acknowledge these important contributions; however, my understanding of women’s issues doesn’t want to privilege one position over the other. I have therefore drawn upon a

³² Fay, May Ann. “Early Twentieth-Century Middle Eastern Feminisms, Nationalisms, and Transnationalisms.” *Journal of Middle Eastern Studies*, Vol.4 No.1, Winter 2008, 1-5, 1.

³³ Fay, May Ann. “Early Twentieth-Century Middle Eastern Feminisms, Nationalisms, and Transnationalisms.” 2.

³⁴ Barbara F. Stowasser. *Women in the Qur’an: Traditions and Interpretations*, Oxford: Oxford University Press, 1996, 3.

more fluid conceptualisation of the issue. For this reason my working definition of the term will be based on computing management.

Issue in Computing Management

In computing management an issue can be an area of improvement or a bug, and has several levels of severity, from 'high' to 'cosmetic'. Such issues must be addressed, tracked, tackled, and solved; it is a unit of work that serves the purposes of improving a system. In these terms, an issue in computing management is related and exists as long as there is a project in place or a "temporary endeavour undertaken to produce or improve a product or service."³⁵ The issue per se entails a heterogeneous set of actants, which includes project management software, project planning, and scheduling programmes, as well as the presence of a bug that defines the severity of the issue and the amount of work required to fix it.

At first glance, "issue" as intended in computing management makes the concept difficult to apply to an analysis of women's issues as emerging and existing through technology.

However, similarly to computing management, "women's issues" is usually addressed as an umbrella-term, one word that describes problematic situations that need to be voiced, discussed, and solved. Behind this concept hides the hard work of local organisations, international organisations, policies, established political frameworks, and conventions. In a Middle Eastern context, women's issues are a complex territory where Islamic jurisprudence, societal practices, colonialism, anti-colonialism, and post-colonialism meet and intersect with political instability, a non-homogenous enmeshment of elements (factors and actors) that needs addressing.

³⁵ Project Management Institute, *A Guide to the Project Management Body of Knowledge*, Newton Square: PE, Project Management Institute Inc., 2000, 4 and 18.

How to then reconcile “women’s issues” with an idea of the issue that draws upon computer management and digital studies, and sits at the crossroad of digital media and women’s studies? Such issues, as in computing management, might be temporal, not pertaining solely to the social sphere but emerge in many different ways, places, and in the numerous relations they create.

If such reasoning is followed, the issue, its transformation, its emergence, and its persistent becoming something new and different acquires centrality, and all the actants that contribute to its existence and multiplicity deserve the same relevance and attention. Recognising the issue some centrality also opens the doors to new discussions with regard to women, technology, and activism.

In consequence, the choice will be one of mapping the movements, theories, and activities put forward by women, with the aim to disentangle the multiplicity of topics considered ‘relevant’ in these two countries trying to move “between fields.”³⁶ This will include different elements, actants, and layers. In order to conceptualise such movement and make it operative In the sections to follow, I will introduce and discuss the concept of multiplicity, the idea of the layer, but also network in order to then move to the formulation of the multi-layered and networked map this thesis wants to construct.

Multiplicity and Layers

Before explaining what the multi-layered and network map wants to be and how it operates in the specificity of this thesis, it is necessary to introduce the concepts of multiplicity and layer that are at the core of the map that this thesis proposes.

³⁶ Mol, Annemarie. *The Body Multiple: Ontology in Medical Practice*, 9.

The multiplicity I want to investigate and embrace is inspired by Annemarie Mol's studies of atherosclerosis; Drawing on "social scientific and [...] ethnographic methods of investigation", Mol shows how the 'disease' of atherosclerosis, a vascular condition of artery walls thickening due to accumulation of fatty material, becomes "more than one without being fragmented into many [...] without shifting into pluralism."³⁷ What is interesting in her work is the attention to the coexistence and multiple existence of the disease, which is objective and can be studied under the microscope but, at the same time, belongs to many different places, many different layers that don't make it more real, relevant, or more 'scientific' but enrich its very same existence and relevance.

Mol refers to the 'practicalities' of atherosclerosis and rather than defining what atherosclerosis 'is' she moves onto seeing what it becomes in the many different places it is discussed, from the laboratory to the waiting room of a hospital where patients wait to be examined. What she tries to do is a 'patchwork' of what atherosclerosis is, without any pretence of all-encompassing theories and "final solutions."³⁸ In fact, her work's only conclusion is that of a multiplicity of existences of atherosclerosis, one that recognises how each actant plays a relevant role in the making of the disease, without any pretence to find a true definition and explanation of what atherosclerosis is.

Peter Keating and Alberto Cambrosio have done a very similar work with different typologies of diseases to "question the rigid dichotomy between the social and the technical", which lies "behind [...] scientific and medical debates"; their aim is the definition of a new mode of enquiry that "range[s] from controversy to peaceful coexistence and cooperation."³⁹

³⁷ Mol, Annemarie. *The Body Multiple: Ontology in Medical Practice*, 1 and 151.

³⁸ Mol, Annemarie. *The Body Multiple: Ontology in Medical Practice*, 152.

³⁹ Cambrosio, Alberto and Keating, Peter. *Biomedical Platforms. Realigning the Normal and the Pathological in Late-Twentieth-Century Medicine*, Oxford: MA, MIT Press, 2003. 21.

Keating and Cambrosio's biomedical platforms are inwardly heterogeneous; the new domains that coexist and cooperate in platforms in fact "correspond to differences within platforms and between different, overlapping platforms."⁴⁰

Overlaps, relations, as well as disjuncture are the three keywords that can be extrapolated from Mol's multiplicity and Keating and Cambrosio's platforms. Keating and Cambrosio's platforms' multiple existences and inner heterogeneity have affinity with the operational term 'layer' as used in software management; in fact, a layer is defined as an "object on the map that consists of one or more separate items, but are manipulated as a single unit."⁴¹

Current mapping software are based on multi-layering, which allows greater details and reduces the 'author's choice' to the "most pertinent information to highlight" on the map.⁴² The idea of the layer has been discussed and addressed in many different ways, from Actor Network Theory co-founder Latour and his colleague Tommaso Venturini to code-related and code-focused interpretations of the layer as "[...] the new universal intermediary" by Lev Manovich.⁴³ Layer is also used in Deleuze and Guattari's philosophy, and it is addressed as a belt, "giving form to matters, imprisoning intensities and locking singularities into systems of resonance and redundancy."⁴⁴ Layers, following Deleuze and Guattari,

⁴⁰ Cambrosio, Alberto and Keating, Peter. *Biomedical Platforms*. 49.

⁴¹ "Layer". Google Developers page for Google Maps JavaScript API v3. [Online]. Available at: <https://developers.google.com/maps/documentation/javascript/layers>.

⁴² "Layer". Google Developers page for Google Maps JavaScript API v3. [Online]. Available at: < <https://developers.google.com/maps/documentation/javascript/layers> >.

⁴³ Manovich, Lev. "Media After Software." *Journal of Visual Culture*, Vol. 12, No 1, April 2013, 12-30.

⁴⁴ Deleuze, Gilles and Guattari Felix. *A Thousand Plateaus. Capitalism and Schizophrenia*, Minneapolis: MN, University of Minnesota Press, 1987, 40.

operate by code and territoriality; a layer is a stratum, which is in turn complex and articulated in other layers; it is therefore multiple.

The importance of the layer is also not new to the world of digital humanities; since 2009, projects such as Rome Reborn and HyperCities have referred to integrated map layers from Google Earth and other sources to highlight the fundamental shift of current research from being theory-based to being data-driven.⁴⁵

Despite the fact that the notion of the layer already introduces complexity and heterogeneity, it could also suggest homogeneity at the scale of a layer, contrasting neatly with other layers situated above or below in the formation of a map. Another important problem that the choice of layer could bring to the fore is that of hierarchy. Layers are hierarchically organised—like the Internet or like the topological studies of the soil—hence each layer can have inner differences but it sits neatly above or below another layer.

In my re-appropriation of the term, the layer's heterogeneity happens intra-layer as well as inter-layer. This would mean that the heterogeneity doesn't only lay in the layers' ability to enmesh into one another but also in the capacity of each constitutive element of (or that sits on) a specific layer to enter in relation with other constitutive elements in other layers.

I would further argue that as a consequence, there emerges a multi-layered network where hierarchy is most often missing, and forms and space, but also time, leave room to fluid and ever-dynamic entities that can be mapped only temporarily and are prone to disorder, meaning that these layers and the actants that emerge and aggregate within these layers

⁴⁵ Project *Rome Reborn*, *A Digital Model of Ancient Rome*. [Online]. Available at: <<http://romereborn.frischerconsulting.com/gallery-current.php>>; Project Hypercities, and <<http://egypt.hypercities.com>>. Last accessed 12 April 2015.

enmesh in one another, disappear in one another, and new aggregations are continuously formed and established. Based on these observations, I will proceed with the introduction of the next concepts of this thesis, that of network and multi-layered map.

Network and multi-layered map

The discussions presented above on the reallocation of agency to actants rather than exclusively subjects, and the reinterpretation of the notion of layer, support the conceptualisation of a map that is, as previously introduced, networked and multi-layered.

The concept of the network will be explained in detail in chapter 4; however, it is necessary to explain its implications in the making of the multi-layered map. Network is core to ANT and it is intended to mean the sets of relationships inevitably created by the encounter of different entities, of social, economic, political and technological nature.⁴⁶ John Law clarifies that the term *network* builds onto the notion of *relatedness* and *topology*.⁴⁷ In relation to the first point, that of *relatedness*, Bruno Latour refers to networks as “associations between heterogeneous elements.”⁴⁸ The novelty of this idea of the network is one of inclusion and reflection rather than categorisation. Latour and ANT—who start from the distinction between traditional sociology and “sociology of association”⁴⁹—focus on networks of relations that are not composed solely by people or machines

⁴⁶ Latour, Bruno. “Morality and Technology, The End of the Means.” *Theory, Culture and Society*, Vol. 19 Issues 5/6, 247-260; 253.

⁴⁷ Law, John. “After ANT: complexity, naming and topology.” In Hassard, John and Law, John. (eds). *Actor Network Theory and After*. Oxford: Blackwell, 1999, 6.

⁴⁸ Latour, Bruno. *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford: Oxford University Press, 2005, 5.

⁴⁹ Latour, Bruno. *Reassembling the Social: An Introduction to Actor-Network-Theory*, 33.

but by heterogeneous actants, human and non-human, that interact and create a complex set of relations, or associations.⁵⁰

Such heterogeneously formed networks do not only offer to go past object and subject or dyadic *modus pensandi* and *operandi*. They also propose new ways of problematising politics, they are public as opposed to private, and blur the divide of scientific, social, and technological fields, highlighting how “things that are not themselves social” come to be “patterned to generate effects like organisations, inequality, and power.”⁵¹

It must be recognised that the concept and figure of the network is not new to social sciences, philosophy, and the sciences in general. The idea of the network has been used and adapted in many disciplines since the 18th century, starting with the Königsberg’s seven bridges experiment proposed by Leonhard Euler in 1736.⁵² In the paper written to explain his findings and position, Euler argued “a graph has a path traversing each edge exactly once if exactly two vertices have odd degree,”⁵³ opening the doors to graph theory.

The social sciences embraced and further developed the idea of the network to explain group dynamics and social ties. Specifically, Social Network Analysis is tied to the name of Wolfgang Köhler although Georg Simmel had already talked about group ties in terms of social geometry and

⁵⁰ Law, John. “Notes on the Theory of the Actor-Network: Ordering, Strategy and Heterogeneity”. *Systemic Practice and Action Research*, Vol. 5, No. 4, 1 August 1992, 379-393.

⁵¹ Law, John. “Notes on the Theory of the Actor-Network: Ordering, Strategy and Heterogeneity”, 385;

Latour, Bruno. *Reassembling the Social: An Introduction to Actor-Network-Theory*. 6.

⁵² The problem started much earlier than the 1800s but the birth of Graph Theory is usually associated with Euler’s solution of the Königsberg’s bridges.

⁵³ Leonhard Euler, “Solutio Problematis ad Geometriam Situs pertinentis”, Originally published in *Commentarii academiae scientiarum Petropolitanae*, 8, 1741, 128-140. In O'Connor, John J. and Robertson, Edmund F. *A History of Topology*, Mac Tutor History of Mathematic Archive, St. Andrews, Scotland: University of St. Andrews. [Online]. Available at http://www-history.mcs.st-andrews.ac.uk/HistTopics/Topology_in_mathematics.html. Last accessed 12 August 2014.

distance.⁵⁴ The core concepts and methods of Social Network Analysis date from the 1930s and are linked to three prominent Gestalt psychologists, namely Jacob Moreno, Kurt Lewin, and Fritz Heider.⁵⁵ Jacob Moreno developed interest in and experimented on the structure of friendship and is usually considered the father of the sociogram; Lewin introduced field theory whereas Heider analysed the formation of social groups keeping a spatial approach.⁵⁶

In the 1960s Stanley Milgram began an experiment aimed at classifying the distance between individuals in society. His experiment, which is widely known as the small world experiment,⁵⁷ was intended to prove Frigyes Karinthy's challenge to find a person not connected to him through five other people. Through a choice of random citizens from three different cities in the United States, Milgram tried to investigate—through network theory—the “average path length” of social relations.⁵⁸

The network in Social Network Analysis is made of people engaging into a social connection; the network is therefore strictly human-focused. Actor Network Theory has embraced the notion of network but intended it differently. It is firstly relevant to highlight how ANT has attempted, since its early formulations, to break from a traditional understanding of

⁵⁴ According to Hansen, Schneiderman and Smith, Georg Simmel had already argued that society is only possible when people form associations at the dawn of the 19th century. Hansen, Derek L., Schneiderman, Ben and Smith, Marc A., *Analyzing Social Media Networks with NokeXL. Insights from a Connected World*, London: Morgan Kaufman, 2012.

⁵⁵ Hansen, Derek L., Schneiderman, Ben and Smith, Marc A., *Analyzing Social Media Networks with NokeXL. Insights from a Connected World*, 31-35;

Scott, John. *Social Network Analysis, a Handbook*, London: SAGE, 2004 8-9.

⁵⁶ Hansen, Derek L., Schneiderman, Ben and Smith Marc A. *Analyzing Social Media Networks with NokeXL. Insights from a Connected World*.

⁵⁷ Milgram, Stanley and Travers, Jeffrey. “An Experimental Study of the Small World Problem.” *Sociometry*, Vol.32, Issue 4, Dec. 1969, 425-443.

⁵⁸ Barabási, Albert-László. *Linked: How Everything is Connected to Everything Else and What It Means for Business, Science, and Everyday Life*, New York: Plume, 2003, 26-37; 240-247.

sociology that recognises the existence of a micro social system as distinct from a macro social system. ANT has therefore put forward the idea of a “sociology of association”; at its core there is the notion of network that evolves or changes its meanings in a set of relations not exclusively composed of people or exclusively of machines. Rather, the network ANT proposes is constituted by the interaction of heterogeneous actants, human and non-human, that also enter a complex set of negotiations or associations.⁵⁹

Entanglement and complexity, associations and negotiations are also the basis of Donna Haraway’s cyborg. Although the notion of the network is never explicitly central, Haraway proposed the overcoming of dualisms through the idea of the cyborg born out of the “myriad daily negotiations among humans and non-humans that make up consensus called technology.” A “technoscientific culture” that is produced and produces hybrids (cyborgs), “spatially networked actors and actants”; technoscientific culture results in the relevance of “connections and enrolments”, which are what really “matters.”⁶⁰

Donna Haraway’s cyborg—explained in detail in later chapters—and the concept of the network as used in some ANT work help to reflect on the dynamisms, spatiality, allocation (topological conformation of the relationship between nodes) and interactions of actants that obviate dualisms and hierarchies. I will make use of these dynamic understandings of human non-human relations and will particularly merge the concept of the network with that of the multi-layer I previously introduced.

⁵⁹ Law, John. “Notes on the Theory of the Actor-Network: Ordering, Strategy and Heterogeneity.” *Systemic Practice and Action Research*, Vol. 5, No. 4, August 1992, 379-393.

⁶⁰ Donna Haraway. *Modest_Witness@Second_Millennium. FemalMan ©_Meets_OncoMouse™. Feminism and Technoscience*, (London:Routledge), 1997 125-128.

In fact, the intention of this thesis is to work on these principles or philosophical reflections and answer questions that are not only (or not exclusively) concerned with issues existing in Egypt and Saudi Arabia.

Envisioning a network where actants interact helps question the ways in which apparently unrelated elements—like an accent on a specific word used in a specific Surah—contributes to the formation of an issue, how it expanded and extended beyond the layer it belongs to (in the case of accents, linguistics and translations) and entered into relations with other actants in other layers (specific events or particular contingencies).

A concept of a networked and multi-layered map helps ask questions with regard to which issues gain more prominence and how; which ones emerge as issues worth debate and discussions; questions on who negotiated and opposed their meaning and on how they have formed can also be added. Most importantly, how and why do some issues seem to gain more relevance than others and how does technology allow for new issues to emerge and find shape? These questions could contribute to feminist and gender studies investigations of women's issues.

The problematisation of women's issues in Egypt and Saudi Arabia will not only be about a much needed analysis of language of the Qur'ān and the Ahadith (which will find space in this thesis); it will also include an investigation of how the idea of "women's issues" per se is a multi-layered network that exists at many levels and generates new forms of cultural understanding of women's issues in Egypt and Saudi Arabia.

As this thesis wants to highlight, it is not possible to talk about women's issues as something that exists per se. Through ANT's network,⁶¹

⁶¹ John Law. "Notes on the Theory of the Actor-Network: Ordering, Strategy and Heterogeneity", (385);

Latour, Bruno. *Reassembling the Social: An Introduction to Actor-Network-Theory*, Oxford: Oxford University Press, 2005, 6.

the challenging idea of the cyborg and Software Studies' focus on the sociality of software, the relevance of coding practices, and the redistribution of agency, this thesis advances the idea that a multi-layered and networked map of women's issues in Egypt and Saudi Arabia helps recognise the multiple and networked life of an issue, its belonging to many different layers, and its being continuously in flux through the many layers where they emerge, are discussed, and co-exist. These layers exist, are enmeshed with each other, form and are formed through their interactions, and contribute to the significant dynamics of the technowomen.⁶²

Chapters

The first chapter will analyse the debates surrounding technology. I will make use of Andrew Feenberg's reflections on the relationship between technology and society and Katrina Waelbers' grid of theories of technology. I will then proceed to introduce the concept of the public as found in Noortje Marres' interpretation of John Dewey to introduce my concept of technowomen and selected Latourian work on the concept of network. In this chapter I will also make use of software studies and will then move into the specificity of feminist theories with regard to technology, technofeminism, and Donna Haraway's cyborg manifesto.⁶³ Following Nancy

⁶² Latour, Bruno. "Gabriel Tarde and the end of social." Joyce, Patrick (ed). *The Social in Question. New Bearings in History and the Social Sciences*. London: Routledge, 2002, 117-132, 117.

⁶³ Feenberg, Andrew. *Transforming Technology: A Critical Theory Revised*, Oxford: Oxford University Press, 2002;

Feenberg, Andrew. *Tecnologia in discussione. Filosofia e politica della moderna societa' tecnologica*. Bologna: ETAS, 2002;

Haraway Donna. "A Cyborg Manifesto, Science, Technology, and Socialist-Feminism in the Late Twentieth Century." in Kaplan, David M. (ed). *Readings in Philosophy of Technology*, Oxford: Rowman & Littlefield Publishers, 2004, 161-178;

Waelbers, Katinja. *Doing Good With Technologies. Taking Responsibility for the Social Role of Emerging Technologies*, London: UK, Springer 2011.

Fraser, I will also present the concepts of *counter-publics* as opposed to public sphere. Counter-publics have been described by Fraser as “multiple spheres”⁶⁴ that circulate oppositional discourses with regards to “[...] identities, interests and needs.”⁶⁵ Counter-publics, it will be explained, do not respond to the need to oppose or question the institutional authority of the State. On the contrary, there is a wealth of issues (topics, problems, definitions, and categories) that counter-publics can seek to object and review, and blur the private/public boundaries. Their primary objective is to “[...] de-legitimate some interests, values and topics and valorise others.”⁶⁶ However, despite the contribution that both concepts have offered and continue to offer, I will identify their problematic application to an analysis of digital media and women’s issues in Egypt and Saudi Arabia, and the subsequent choice to use the operative and conceptual tool of analysis, technowomen.

The aim of this chapter is to go through an overview of the theories of technology and society but also move into the ways in which I will use and draw on such concepts to develop technowomen.

The second chapter will look into the Third World feminism⁶⁷ and the many reflections around technology as brought forward by Naomi Sakr, Isabelle Sreberny and Gholam Khiabany, Fatima Mernissi, and accounts of women, media, and liberation, addressed as “nextopia” by Albrecht

⁶⁴ Fraser, Nancy. “Rethinking the Public Sphere: A Contribution to the Actually Existing Democracy”. In *Social Text*, No.25/26, 1990, 56-80. 60.

⁶⁵ Fraser, Nancy. “Rethinking the Public Sphere: A Contribution to the Actually Existing Democracy”, 66.

⁶⁶ Fraser, Nancy. “Rethinking the Public Sphere: A Contribution to the Actually Existing Democracy”, 73.

⁶⁷ The term will be explained in the second chapter. Third World is here intended as the choice made by feminists to “call for feminism without the borders of socio-economic class, race, ethnicity, nationality, and sexual orientation.” Lynette Kvasny and Jing Chong. “Third World Feminist Perspectives on Information Technology.” Trauth, Eileen M. (ed). *Encyclopedia of Gender and Information Technology*, London: IGI Global, 2006, 1166-1171.

Hofheinz.⁶⁸ The determinism underlying the consideration of technology and women in developing countries (and specifically the Middle East and North Africa areas) will be analysed and brought to light.

Following the concept of the network, I will introduce the elements that constitute a network of women's issues, nodes—actants—and relations that are established between such nodes. I will therefore consider the relations established between linguistics, human interpretations of sacred sources of Islamic jurisprudence, feminist theories, Orientalist writings, and writers and anti-colonial rhetoric. I will highlight how this very heterogeneous set of actants sits together and makes an important layer emerge, that of representation, a troubling term that will consider how expectations, explanations, and alternative interpretations of the Qur'an and the 'Muslim woman' feed back into a complex network where certain issues arise, make sense, are built and constructed, become relevant, and therefore multiply. At the same time, this chapter will highlight how each node becomes—at a closer look—a network itself. I will do so through the analysis of theories, discussions of Third World feminists but also acts of rejection and resistance to societal practices in Egypt and Saudi Arabia. In particular, I will start the analysis from a dichotomy, an opposition proposed by scholars such as Fatima Mernissi, Chandra T. Mohanty, and others who emphasise a "real" Muslim woman as opposed to a "represented" one.⁶⁹

From this opposition, I will argue, it is possible to trace many lines and follow many actants that constitute a layer in the multi-layered map.

⁶⁸ Mernissi. *Karawan, Dal Deserto al Web*, Firenze: IT, Giunti Editore, 2004;

Sreberny, Annabelle and Khiabany, Gohlam. *Blogistan: The Internet and Politics in Iran*. London: IB Tauris, 2011;

Hofheinz, Albrecht. "The Arab Spring. Nextopia? Beyond Revolution 2.0." *International Journal of Communication* [Online], Vol. 5, Issue 18, 2011. Available at: <<http://ijoc.org/index.php/ijoc/article/view/1186>>. Last accessed 15 April 2015.

⁶⁹ The titles I will reflect on will be discussed and presented in details in Chapter 2.

Such layers expand to colonial literature, third world feminism as proposed by Lynette King, and artistic representation of Muslim women in early Islamic history. The aim of this chapter is to show how the concept of issue takes life in a very local reality that takes up imagery, and debates; at the same time, it involves political and economic aspects, colonisation, and anti-Western rhetoric from Edward Said to Franz Fanon that—as Rosi Braidotti argues—has at times fallen into a “humanist” trap because it “[...] wanted to rescue humanism from their European perpetrators.”⁷⁰

This chapter aims to be a first step toward a network understanding of women’s issues, their multiplicity and complexity. Women’s issues in these two countries, I argue, must therefore be mapped in relation to their enmeshment and intertwinement with several other layers and actants, such as political designs, rhetoric, localities but also women’s campaigns and ideologies, articles, technological devices, and technological artifacts.

In the third chapter I will continue a map of women’s issues focusing specifically on the two countries and the activities of Egyptian women and women’s movements and fights in the 19th and 20th century through the press, documents, and other traces left in history to highlight what problems they fought for, what issues they voiced and discussed, and how these discussions evolved throughout the years.⁷¹ These aspects will add complexity, and new layers (as well as new ways in which the actants enter in relation with each other) will then be added to the map.

The aim of this chapter is to see how traces left in history contribute to the multiplicity of each and every issue that will emerge from women’s acts and marches, fights, and struggles for their rights in these two

⁷⁰ Braidotti, Rosi. *The Post-human*, Cambridge: Polity Press, 2013, 24.

⁷¹ There isn’t a Saudi women’s movement and the history of Saudi Arabia as a Nation States was slow and started in the 1930s. As it will be explained, Saudi Arabia forbids any form of political or apolitical association.

countries. However, I will also look at particular elements that contribute to the construction of women's issues, particularly in Saudi Arabia. These elements pertain to rather oblique fields, such as that of architectural choices and medical papers, and see how they add complexity and enrich the network the map is tracing. The originality of this chapter lays in two main questions; how and where do feminists and academic debates over the misinterpretations of the Qur'an and the wrong position of women in the sources of Islamic jurisprudence sit in the context of these movements? But also, what layers emerge in the act of mapping real life experiences as coming from historical accounts of women's activisms and movements?

These two chapters do not aim to offer a comprehensive and complete analysis of the complexity of women's issues in the two countries. They respond to the need to contextualise the digital analysis of such issues and will serve as a gateway to the online analysis. Through the literature review coming from scholars as well as international conventions and women activists, I have put together an initial list of terms that can be seen as issues and have researched them online. I do recognise that it cannot include all possible issues discussed online in these two countries, however I considered this initial list a starting point of my investigation of the transformation and enactment of women's issues through digital media and the subsequent emergence of technowomen.

In the fourth chapter I will show both how I could compile this list and how it has been used for the online analysis; I will also explain how the results have been catalogued, archived, and then input into two main software: Issue Crawler and Gephi. I will also discuss the limitations of visualisation tools in a digital analysis and explain how the growing 'social turn' of search engines' indexing methodologies that led me to understand how relying on automated software tools of analysis (still based on hyperlink relations) can produce false results. It is important to notice that I mixed the two main software with other tools such as Netvizz for Facebook

and proprietary tools Simplymeasured for Facebook and Twitter analysis, and Infamous for real time Twitter analysis.⁷² All these tools have become part of my website, which is a way of showing how I have tried to map women's issues in the two countries, although I recognise how the online analysis is only a part of the map that is traced throughout the thesis.

The results of my analysis will be shown in the fifth and sixth chapter where I will show how technowomen emerge as both a new layer and as actants. Particularly, I will focus on Harassmap, which is a Cairo-based organisation that tackles sexual harassment but it also a crowdsourced map based on the open source platform Ushahidi. Harassmap will be interpreted and presented as both, a map and an organisation that tackles sexual harassment. It will also be presented as a new way of understanding the impact of software on navigational attitudes in Egypt. Most importantly, in this chapter I will highlight how Harassmap redefines, through code, cartosemiotics and the overall ideas behind the map as a 'tool' for directionality and simplicity.

The fifth chapter will discuss the results of the digital analysis and present the emergence of technowomen that materialise through technologies, the issue, and users' activities and personal stories. I will present the cases of *Kolenalaila* – a rather unique online initiative- and *BussyProject* –a street theatre initiative started in Cairo University in the 2005- and explain the mechanisms through which technowomen emerge and enrich the understanding of women's issues in Egypt and Saudi Arabia. I will particularly focus on the impact of technological artefacts on a scattered (albeit actively engaged) Saudi public, leading to a political decision to challenge the driving ban and organise driving days. The driving ban has in fact emerged online as a key issue for women's organisations,

⁷² Infamous doesn't explain how the analysis is executed; as a consequence, I will discuss the case of three threads I have followed (2 in Egypt and 1 in Saudi Arabia) but the majority of the Twitter tracking has been done through content analysis and displayed through Infamous.

campaigners and activists. I have in particular followed the 17th June 2011 driving campaign, and the 26th October 2013 driving campaign.⁷³ In particular, this chapter keeps expanding the question, how and where do feminist Qur'anic exegeses and academic debates over the misreading of the Qur'an sit in the context of these movements? And what layers emerge in the act of mapping discussions and debates over women's issues as coming from technowomen as new actants and layers?

In the sixth chapter I will present Harassmap as an organisation that has merged activism and crowdsourcing; I will further stress the mechanisms through which technowomen emerge and contribute to a complex articulation of women's issues, crowdsourcing, and participation that can no longer neglect the important role that software plays.

The final results initially led me to argue, following Margot Badran,⁷⁴ the existence of two cultures of women's issues in these two countries; on one side, the academic analysis of women's issues and the accounts of women's movements; on another, the experiences of women that emerge on and through digital media. However, these different accounts of women's issues materialise the idea of the multi-layered map that comprises several actants. I will also show how certain nodes in the network become themselves networks; in fact, with a closer look, some nodes, like Harassmap, become networks themselves. These case studies demonstrate how technology becomes part of, extends, and expands my analysis into women's issues in Egypt and Saudi Arabia in a way that contributes to the materialisation of new ways for an issue to exist and cultural forms to emerge.

⁷³ I have followed tweets and news, Facebook event pages and blogs.

⁷⁴ Badran, Margot. *Feminism, Islam and Nation. Gender and the Making of Modern Egypt*. Princeton: NJ, Princeton University Press, 1996.

I hope to contribute to the development of new interdisciplinary methodologies that seek to best merge current software and automated analysis of digital media, digital media theory, and cultural theory and studies.

Chapter 1: Technology, media and society: approaches and debates

1.1 Introduction

At the turn of the 20th century new technologies led to new discussions over their impact over society. The questions with regards to the role played by technology responded to the acknowledgement that “what human beings are and will become is decided in the shape of our tools no less than in the action of statesmen and political movements. The design of technology is thus an ontological decision fraught with political consequences.”⁷⁵

Technological developments that stirred up fears and theoretical debates worthy of analysis span from the advent of cinema to the machine gun to the atomic bomb, which have come to symbolise the culmination of technological destruction in the First and Second World Wars, respectively. A vast array of theories started to reflect on the effects of technology upon society, recurring to complex and composite frameworks centred either on the neutrality of technology or its inner political and persuasive power. Drawing on Andrew Feenberg’s writings, I will argue how various forms of determinism have long characterised dichotomous discussions over technologies and society, and how media theories have embedded these dichotomies.

The discussions around technological artefacts and their effects have been mainly based on the assumption that human agents create technology with the goal to make society more efficient. In this optic, society is a strongly structured and hierarchical assemblage of subjects, or agents, capable of creating and using (and abusing) technology; however,

⁷⁵ Feenberg, Andrew. *Transforming Technology: a Critical Theory Revised*, Oxford: Oxford University Press, 3.

technology plays the passive role of the tool whose main objective is to be efficient. Opposite to these assumptions is technological determinism, positing—and stressing—the power of technologies to shape societies and influence human actions.

This chapter will analyse this specific dichotomy and the deterministic discourses lingering on in some cultural and media theory. I will propose an alternative based on the concept of the network, pointing at the difficulty of analysing social media and women in Egypt and Saudi Arabia if a dualistic approach is applied. I acknowledge the central role that software algorithms play in the making of women's issues in the two countries and their strong influence on what is usually addressed as networked society.⁷⁶

Drawing on Actor Network Theory, Donna Haraway's cyborg, and some of Rosi Braidotti's work,⁷⁷ I will argue that any relationship, being it between subject and object, or society and technologies of communications (be they mass media or the Internet) must recognise their interconnectedness and the co-constitution of many actants within their production.⁷⁸

The aim is to move beyond the dualistic visions of technologies either as liberators or oppressors, especially in times where technologies

⁷⁶ The term is usually associated to Manuell Castells' *The Networked Society*, and it is now used to address digital communities and new forms of identities that find space. Castells, Manuel. *The Rise of Network Society*, Oxford, UK: Blackwell Publishing, 2010.

⁷⁷ I will namely refer to Braidotti, Rosa. *The Posthuman*, Cambridge: Polity Press, 2013 and Braidotti, Rosa. *Metamorphoses: towards a materialist theory of becoming*, Cambridge: Polity Press, 2002.

⁷⁸ Goriunova, Olga. *Art Platforms and Cultural Production on the Internet*, London: Routledge, 2012, 3;

Mol Annemarie, *The Body Multiple. Ontology in Medical Practice*, London: Duke University Press, 2002.

regulate and become part of our everyday life through algorithms that have long become our prosthetic extensions.⁷⁹

To move away from dualisms and dichotomies means to overcome ideas of technological developments—especially in media communication—either as harbingers of freedom or, as in the case of the Middle East and women’s movements in a Muslim context, vehicles of change. Rather, the recognition of the ubiquity of these technologies can show how digital media contribute to the complex and multi-layered map of women’s issues in these two countries and other contexts.

1.2 Four dimensions of technology and society

The reflection on technological artifacts can be traced back to Ancient Greece and the questions concerning how *techne* (practice) is an imitation of Nature.⁸⁰ The discussion of *techne* historically included an oscillation between instrumentalism and technological autonomism. Drawing on Katinja Waelbers’ matrix and Andrew Feenberg’s account of the theories on technology and society, I will delve into the oppositional views of technology as often proposed in the social sciences.

Waelber’s matrix (Figure 1) summarises the various theories on the relation of technology and society. The Cartesian graph creates four quadrants, grey areas where hybrids can be formed, found, and theorised.

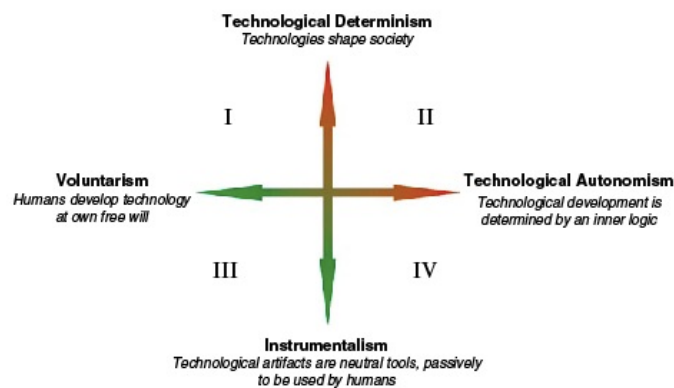
⁷⁹ Fiore, Quentin and McLuhan, Marshall. *The Medium is the Message: An Inventory of Effects*, London: Penguin Books, 1967.

⁸⁰ Plato, *Timaeus*, Forgotten books, 2010. [Online]. Available at <<http://classics.mit.edu/Plato/timaeus.html>>. Last accessed 15 May 2012;

Aristotle, *Physics*, Book II, Forgottenbooks: 2008. [Online]. Available at: <<http://classics.mit.edu/Aristotle/physics.2.ii.html>>. Last accessed 15 May 2012.

As Waelbers argues, the two axes include each other because “determinism often implies some form of autonomism (quadrant 2) and voluntarism is always accompanied by some instrumentalism (quadrant 3).”⁸¹

Figure 1: *The four dimensions of technology* [Waelbers, 5]



These quadrants have been filled with theories, novels, optimistic or pessimistic explanations, and experiments that further complicated the relationship between society and technology. According to Feenberg there are many theories on technology and society that followed one another since the formalisation of the sciences, and they can be loosely grouped in two major streams: instrumental and substantive.⁸²

Instrumentalism sees technology as “subservient to values established in other social spheres.”⁸³ Technology is therefore a means to an end; its neutrality makes it apolitical and without cultural impact. The only logic it follows is that of efficiency. The second framework is that of substantivism, which could potentially sit between the second and the

⁸¹ Waelbers, Katinja. *Doing Good With Technologies. Taking Responsibility for the Social Role of Emerging Technologies*, London: Springer 2011, 5.

⁸² Feenberg, Andrew. *Transforming Technology: a critical theory revised*, 3.

⁸³ Feenberg, Andrew. *Transforming Technology: a critical theory revised*, 5.

fourth quadrants of Waelbers' graph. Waelbers and Feenberg position Jacques Ellul and Martin Heidegger in this theoretical quadrant. Substantivism, Feenberg maintains, confers "autonomous cultural force to technology";⁸⁴ as a consequence whatever the uses of technologies, the implications of technologies over societies are much greater than mere efficiency. Contrary to instrumentalism, substantivism envisions a technologically altered culture.⁸⁵

Despite differences in the ways technology is depicted, instrumentalist and substantivist theories according to Feenberg share the idea of technology as a destiny, making it more about strongholds than about tearing down boundaries.⁸⁶ Similarly to Waelbers' chart, Feenberg tries to broadly classify the theories around technology in a table (Table1).

Table 1: *Andrew Feenberg Theories of Technology* [Feenberg, 11]⁸⁷

Technology	Autonomous	Humanly controllable
Neutral	Determinism (Traditional Marxism)	Instrumentalism (Liberal thought)
Cultural	Substantivism (Technology is a means to an end)	Critical Theory (Alternative to the means-ends philosophy)

In *Questioning Technology*, Feenberg adds determinism and constructivism to instrumentalism and substantivism, and discusses in

⁸⁴ Feenberg, Andrew. *Transforming Technology: a critical theory revised*, 7.

⁸⁵ Feenberg, Andrew. *Tecnologia in discussione. Filosofia e politica della moderna societa' tecnologica*. Bologna:ETAS, 2002, 9.

⁸⁶ Feenberg, Andrew. *Transforming Technology: a critical theory revised*, 7.

⁸⁷ Feenberg, Andrew. *Tecnologia in discussione. Filosofia e politica della moderna societa' tecnologica*, 11. This table has been translated from Italian.

depth the role played by the Frankfurt school, putting technology in the broader context of democracy and the discourses of democracy and participation.⁸⁸

Determinism, he argues, is rooted in the biological sciences as well as in the social sciences, and Feenberg sees in Darwin and Marx the main points of reference for early formulations of determinism. Determinism shares with instrumentalism the idea of a neutral technology. Contrary to instrumentalism, it doesn't envision the possibility of technology being humanly controllable and has thus given way to ideas of a technocracy, or a scientifically and technologically advanced way of making democratic decisions.

Technocracy as a notion and practice came under attack in the late 1960s, with the student movements in the US, followed by the strikes and the student movements in France and Italy. During these years of political turmoil, critical theory suggested a number of new dystopian reflections on technology as a form of control. Herbert Marcuse, Michel Foucault, and also the environmentalist movement and feminist reflections on the social construction of gender advanced new positions and reflection on the ways in which technologies could become a means to power (or bio power) and control that could find space and emerge in different forms.⁸⁹

⁸⁸ Feenberg, Andrew. *Tecnologia in discussione. Filosofia e politica della moderna societa' tecnologica*. 1-22 and 89-120.

⁸⁹ Foucault, Michel. *Society must Be Defended: Lectures at the College De France, 1975-1976*, New York: Picador Reading Group, 2003, 43-64;

Butler, Judith. "Performative Acts and Gender Constitution: An Essay in Phenomenology and Feminist Theory." *Theatre Journal*. Vol. 40, No. 4, Dec.1988, 519-531.

1.3 The Lippmann-Dewey debate: From publics to technowomen

Technocracy and the effects of technological developments over society have been interestingly analysed by philosopher and scholar Noortje Marres through the analysis of the Lippman-Dewey debate.⁹⁰

In 1922 Walter Lippmann, in *Public Opinion*, argued that with technological developments (from transportation to the radio alongside other developments), public affairs had become too complicated for people to understand and for government to handle.⁹¹ What was at stake, Lippmann argued, was the sense of democracy that needed redefinition;⁹² in fact, Lippmann pointed out how representative democracy was to be replaced by a democracy of specialists, or technocrats, a new elite aware of the challenges posed by technological changes, able to make decisions that had a positive impact on society.

In Marres' reading of Lippmann, in technological societies complexity becomes the norm and politics is "permeated" by "too much fogginess."⁹³ Such fogginess would therefore lead to the need for an apparatus of technocrats that would help make the right choices. In such a situation, the democratic system falls into crisis and, as Marres argues, democracy comes to be allocated in the hands of technocrats, a new technologically led oligarchy. It was in fact Lippmann's idea that governments could not thrive with this new complex reality (we could use the word "globalised" reality).⁹⁴

⁹⁰ Marres, Noortje. *No issue, no public: democratic deficits after the displacement of politics*, PhD dissertation, Amsterdam: Universiteit Van Amsterdam Press, 2005.

⁹¹ Lippmann, Walter. *Public Opinion*, New York: Free Press Paperbacks, 1997, 104.

⁹² Lippmann doesn't clarify in this stance according to what parameters democracy could be defined.

⁹³ Marres, Noortje. *No issue, no public: democratic deficits after the displacement of politics*, 41.

⁹⁴ Marres, Noortje. "Issue Sparks a Public into Being." In Latour Bruno and Weibel, Peter (eds). *Making Things Public: Atmospheres of Democracy*, Cambridge, MA: MIT Press, 2005, 208-218, 210.

Marres continues her analysis presenting John Dewey's response to Lippmann. Dewey admitted the complexity of technological issues; however, contrary to Lippmann, it was Dewey's position that complexity should not lead to the formation of a technocratic oligarchy.⁹⁵ On the contrary, the new challenges offered by technological societies were to be considered an opportunity to include the public in the process of decision-making.

Dewey was not completely clear on how a public could get organised to address an issue. However, Marres' interpretation of Dewey's discussion of a public is fruitful. Public is an assemblage of individuals that have nothing in common until an issue comes to the fore and attracts individuals' interests. Such individuals thus gather around it and discuss it, debate it and look for addressees to solve the issue. Even when they are part of the same public, these individuals who have gathered around an issue are still only loosely affiliated yet ready to assemble and disassemble once the issue is resolved. In this conception, groups do not have a spatial-temporal definition but assemble and de-assemble as a consequence of the issue at stake.⁹⁶

If for Lippmann the non-mediated information would go through technocrats with specialist knowledge on certain aspects of the issue, for Dewey a public must be brought into the picture. Contrary to Lippmann, Dewey recognised that the main objective for a public to emerge and form an opinion was to discuss and, if necessary, disagree on a specific issue (a problem or controversial topic).

⁹⁵Dewey, John. *The Public and Its Problems*, Athens, OH: Ohio University Press, 1989.

⁹⁶ Nortje Marres, "Issue Sparks a Public into Being", 217.

I argue that the notion of technowomen can expand and enrich the Lippmann-Dewey debate. Technowomen, in fact, are not necessarily or solely members of a public made of human entities that use the Internet to discuss an issue. Rather, they are the outcome of humans and machines, codes, software, real life experiences, personal stories, movements and statements that redefine the spatiality of the network and its topology. Technowomen do not necessarily aggregate willingly to create a public and are not necessarily communities formed around a specific topic. They are an assemblage of posts, shared personal stories, images or amateur videos, algorithms, APIs and coding practices, a merge between technological and human agents that participate to the enactment and emergence of the issue. Technowomen emerge on the digital layer but they relate and enmesh with other actants, constitutive of other layers. This characteristic makes technowomen a complex and multi-layered network itself.

As discussed in the introduction, the concept of the network has been applied to many different disciplines. Specifically, I mentioned how ANT understands the complex human/non-human network. It in fact envisions several entities (actants) that establish relations, thus building entangled sets of nodes and edges of a highly dynamic nature. The nature of the relations evolves and their output cannot be predicted by the input; as a consequence the network itself becomes something else, or, is translated into something that wasn't originally planned to be or become.

The fluidity that some ANT scholars propose can be found, although with different terminologies, in software studies. Much of the work linked to this field includes discussions on the ways in which inner algorithmic logic can participate in the making of social and cultural practices. Although the concept of the network is never expressly explored, entanglement and assemblage are constitutive parts of the investigations on the ways

computation takes part in the “cultural, aesthetic and existential forms of production.”⁹⁷

Matthew Fuller in fact highlights the ways in which computation transforms cultural practices through software algorithms and through those “neglected aspect(s) [...] which involve(s) the possibilities of virtuality, simulation, abstraction, feedback, and autonomous processes.”⁹⁸ Computation goes hand in hand with data aggregation and accumulation, networked infrastructures and human behaviour, or whatever is “sayable and thinkable,”⁹⁹ and its cultural impact is best understood in conjunction with media that made computers “expressive media.”¹⁰⁰ However, as Wendy Chun highlighted “computation may be the key to new media” but it doesn’t “automatically lead to new media or to software.”¹⁰¹ What emerges out of this intersection of computation, entanglement, cultural practices, and network is a composite concept, one that has been applied to many different interrogations of current socio-cultural contingencies but hasn’t found space, to date, in feminist reflections, especially in relation to an investigation of women’s issues in a Middle Eastern and North African context.

⁹⁷ Goriunova, Olga. (ed). *Fun and Software. Exploring Pleasure, Paradox and Pain in Computing*. London: Bloomsbury Academic, 2014. 6.

⁹⁸ Fuller, Matthew. “Introduction: the Stuff of Software.” Fuller, Matthew (ed). *Software Studies: a lexicon*, Cambridge, MA: MIT University Press, 2008, 1-14, 4.

⁹⁹ Chun, Hui Kyong Wendy and Keenan, Thomas.(eds). *New Media, old media: a history and theory reader*, Oxon: Routledge, 2006, 4.

¹⁰⁰ Chun, and Keenan, (eds). *New Media, old media: a history and theory reader*, 2.

¹⁰¹ Chun, and Keenan, (eds). *New Media, old media: a history and theory reader*, 2.

1.4 Public Sphere and counter-publics in the Middle East

Technology, as highlighted in the introduction, has always been welcomed by both fear and fanfare, simultaneously praised and accused, torn between something that has a meaning and/or a usage. Digital technologies have undergone the same process, igniting debates over the potential realisation of Jürgen Habermas' Public Sphere¹⁰² or Michel Foucault's Panopticon.¹⁰³

In the course of this research the Middle East and South East Asia have undergone periods of political unrest, starting with the 2009 Iranian "Green Revolution" and culminating with the Tunisian and Egyptian Revolutions in 2010–2011. During these times of political turmoil, mass media but also some opinion leaders and academics interpreted the events as the ultimate realisation of Antonio Gramsci's idea of intellectual revolutionaries¹⁰⁴ and Habermas' idea of the Public Sphere.

Jon W. Anderson argued how the Internet created a social space that "involves more than a new medium", including the Internet population and the reshaped "recursive public sphere", trying to describe the Egyptian

¹⁰² Habermas, Jürgen. *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society*, Cambridge: MA, MIT Press, 1991.

¹⁰³ Foucault, Michel. *Discipline and Punish: The Birth of the Prison*, New York: New Vintage Books, 1995.

¹⁰⁴ Simon, Roger. *Gramsci's Political Thought: An introduction*, London: Lawrence and Wishart, 1991, 531.

blogosphere as well as the Iranian Green Movement that initiated the post-election Revolution in 2009.¹⁰⁵

Enthusiasm welcomed Web 2.0 when it approached the Middle East. Many scholars associated blogging with activism and the platforms offered by Web 2.0 to public spheres, highlighting the political power of the Internet and, as a consequence, of blogs.¹⁰⁶ The failed Iranian Green Revolution seemed to curtail the enthusiasm, which was again ignited in 2010–2011 during the Tunisian uprisings, during the Egyptian Revolution, and after the Egyptian elections. Wael Ghonim—at the dawn of the Egyptian Revolution—argued how “this (the Egyptian Revolution) is a Revolution 2.0; no one is a hero cause everybody is a hero,”¹⁰⁷ giving the idea of an autopoietic 2.0 revolutionary organism, without taking into consideration the old debate over Internet access gap and literacy in Egypt.¹⁰⁸

After the 2011 Arab Spring and the Tunisian and Egyptian revolutions that brought hope and change, blogs were ‘released’ from their charge of being revolutionary tools and the baton was passed to Twitter; it became the tool that allowed activists to assemble in the streets, march in

¹⁰⁵ Anderson, Jon W. “Online and Offline Continuities, Community and Agency on the Internet”. *CyberOrient*, Vol. 7, No. 1, 2013. [Online]. Available at <<http://www.cyberorient.net/article.do?articleId=8355>>. Last accessed 11 September 2013.

¹⁰⁶ Tynes, Natasha. “Arab Blogging.” *G21 MidEast*, [Online]. Available at <<http://generator21.net/g21archive/midE20.htm>>. Last accessed 12 April 2013.

¹⁰⁷ Ghonim, Wael. “Inside the Egyptian Revolution.” *TED TALK*, 11 March 2011. [Online]. Available at https://www.ted.com/talks/wael_ghonim_inside_the_egyptian_revolution?language=en. Last accessed 8 August 2013.

¹⁰⁸ The term is here used in reference to the German sociologist Niklas Luhmann and his interest in social systems as autopoietic environments. In particular, Peter Bøgh Andersen put forward an interpretation of the Internet as autopoietic in the 1990s in his paper on the World Wide Web as a “Self-Organizing System”. Andersen, Peter Bøgh. “WWW as Self-Organizing System.” *Cybernetics & Human Knowing*, Vol. 5, Issue 2, 1998, 5-41. However, social media and “Web 2.0” were equally construed as autopoietic, democratic and dynamic by scholars and opinion leaders alike, such as Axel Bruns and Clay Shirky.

Bruns, Axel. *Blogs, Wikipedia, Second Life and Beyond: From Production to Producership*, New York, NY: Peter Lang Publishing, 2008;

Shirky, Clay. *Here Comes Everybody*, New York, NY: Penguin Books, 2008.

Tahrir Square, and picket the Parliament.¹⁰⁹ Soon after the military takeover and the fast growth of the Muslim Brotherhood's political strength, the Revolution 2.0 left the pace of political unrest to a young, active, but politically weak tech-generation.

These events highlight the need to better understand the very dense texture of technology, activism, and the Middle East. It should be firstly recognised that it is rather difficult to talk about an online Public Sphere when studies on users' online behaviour have highlighted the very peculiar nature of community formation online, based on fragmentation.¹¹⁰ To add to this, optimistic interpretations of Public sphere in the context of Middle Eastern countries –and specifically women in a Middle Eastern context- can fail to attend to a very complex societal and cultural reality. As it will be shown in the next section, the relationship between technology and women in a Middle Eastern context has sparked hopes and enthusiasm but also disenchantment in academics and activists alike, giving way to various discussions on democratic processes, self-empowering acts of resistance, and liberation.

Nancy Fraser's concept of counter-publics helps put the idea of the Public Sphere into perspective because she maintains, it rests on gender exclusion¹¹¹ and is of no use when pluralism and oppositional views want to be displayed and given a voice. Rather, she called for 'Counter-publics' or

¹⁰⁹ I recognise that the precedent was set by the Iranian Revolution in 2009 during which Twitter was used as a means of communication with people and media outside the country.

¹¹⁰ Debatin, Bernhard. "The Internet as a New Platform for expressing opinions and as a new public sphere." Donsbach, Wolfgang and Traugott, Michael. (eds). *The SAGE Handbook of Public Opinion Research*, London: SAGE Publications Ltd., 2008. 64-73, 67.

¹¹¹ Fraser, Nancy. "Rethinking the Public Sphere: A Contribution to the Actually Existing Democracy." *Social Text*, No. 25/26, 1990, 56-80, 60. Fraser highlights how femininity was associated to private matters and recurs to Joanne Landes' linguistic reasoning according to which the concept of "public" can be associated to "pubic" and to the need to be a man in order to be able to speak up and discuss. Fraser also brings about the incidental association of the words 'testimony' and "testicles" to further stress the masculine and misogynist rhetoric that conflated into the conceptualization of the Public Sphere. Fraser, Nancy, "Rethinking the Public Sphere", 61.

“multiple spheres” that “expand discursive spaces”;¹¹² counter publics circulate counter-discourses, or oppositional “interpretations of their identities, interests and needs.”¹¹³ What Fraser stresses is the non-necessarily virtuous characteristics of counter-publics. They “help expand discursive space.”¹¹⁴ This last statement, I argue, is necessarily important in the understanding of digital media and computed cultural forms. Counter-publics are not necessarily the ventriloquists Harcourt envisioned; they expand the discursive space but are not necessarily part of a movement, or an advancement of democratic discourses.¹¹⁵

The counter-public, it could be argued, exists in relation to an issue (interests, identities, and needs but also a problematic topic or problems) and not to respond to the rational need to oppose the State and its policies. Rather on the contrary, the blurred division between private and public and the aggregation to respond to interests, needs, and identities shies away from “cultural classifications and rhetorical labels” and discourses are “[...] deployed to de-legitimate some interests, values and topics and to valorise others.”¹¹⁶

1.5 Public, counter-publics and technowomen

¹¹² Fraser, Nancy, “Rethinking the Public Sphere.” 68.

¹¹³ Fraser, Nancy, “Rethinking the Public Sphere,” 66.

¹¹⁴ Fraser, Nancy, “Rethinking the Public Sphere,” 67.

¹¹⁵ Fraser, Nancy, “Rethinking the Public Sphere,” 65.

¹¹⁶ Fraser, “Rethinking the Public Sphere,” 73.

These observations highlight the need to understand the complex texture of technology, digital media, and their interplay within a Middle Eastern context. Technological artefacts haven't escaped feminist attention, and there are many reflections on gender-biased designs of technology or on the modes of usage. However, one element that is still not being considered is how software algorithms and coding practices have influenced (and influence) the ways in which society works.

It is necessary to clarify why, given the richness of the debate around an Islamic public sphere, I chose instead to opt for technowomen. The chapter on the digital analysis of the Egyptian and Saudi social sphere will offer examples to justify the choice of using the concept of technowomen rather than Counter-publics and public sphere. However, a few conceptual clarifications are needed.

The 'problem' my analysis has been having is that of the association of a public (public sphere in Habermasian terms, public in Dewey's sense or Counter-publics) with human agency; a public based on the principle of humans assembling to perform something. In the cases I will discuss at length in later chapters and as I have already explained, technowomen are much more complex; in cases such as Kolenalaila (we are all Laila) or Harassmap, these publics are individual initiatives, short stories, or personal stories that review the idea of spatiality, crowdsourcing, and participation.

Technowomen, as previously highlighted, sit at the intersection of technology and human agency; at the same time, they are not (and cannot be) considered part of a movement or part of Counter-publics. Their sparse and distributed emergence makes them actants that exist and are enacted on the digital layer. They exist in function of and in relation to the issue. Technowomen do not necessarily come together as a public in Marres' interpretation of public; they cannot be saying to create a public sphere or a

counter-public. They exist in their multiplicity and blurred categorisation, being at the same time actants and products of other actants' relations, and constituting new layers in the multi-layered map I trace. This will be particularly shown in the case of Kolenalaila.

Kolenalaila is an initiative started in 2006 with the intent to have bloggers write once a year, for one day in Arabic or English, about an imaginary character: Laila and bring her daily struggles to life. As I will explain in chapter 5, the initiative was launched by a group of Egyptian bloggers with the goal to "devote a day, annually, to speak up about the problems facing oppressed women in the Arab region".¹¹⁷ The name "Laila" was inspired by the 1960s book *The Open Door*. The fictional character, Laila, witnesses, participates to and recounts the 1946 students demonstrations, the early days of the 1952 Revolution and its aftermath, the role of Great Britain and its continuous influence on the country.¹¹⁸

Kolenalaila (or "We are all Laila") is neither an event nor a movement; it would be incorrect to maintain that a public had an issue in common and became loosely affiliated to discuss or address an issue. Likewise, the initiative was not aimed at reaching political power or creating a counter-public. Rather, it was an initiative that would have entailed a sparse and not-necessarily motivated public of independent individuals that would have made Laila emerge through their technological artifacts. These artifacts, I argue, not only make Laila emerge but are possible through Laila and through the complex network of software, codes, algorithms, platforms, and individuals' activities. These aspects, I will argue, cannot be neglected and must be accounted for, taking into consideration feminist reflections on technology that haven't necessarily focused on the Middle East.

¹¹⁷ Global Voices Online. "Kolenalaila." [Online]. Available at: <http://www.cyberkonference.dk/content/kolena_laila>. Last retrieved 7 July 2015.

¹¹⁸ Al-Zayyat, Latifa. *The Open Door*, Cairo: The American University in Cairo Press, 2000.

1.6 Feminist Readings of Technology

Although technological artefacts haven't escaped feminist attention, the focus has rather been on the effects of technology over women in relation to design, usage, and access of technology.¹¹⁹ At the dawn of the computer revolution Ruth Hubbard pointed at the importance for women to "become more involved with technology"¹²⁰ in order to gain control over a male-dominated world. She maintained that women were to be users as well as designers of technologies to become men's equals, or subjects and not just objects of male-dominated and male-created artefacts. Hubbard's view fuels an already rich debate over the problem of 'control' over the design of technologies.

Jan Zimmerman reinforced Hubbard's positions maintaining "without political and financial control over new technologies women will find themselves replaying a familiar scenario in which new technologies serve to reinforce old values."¹²¹

Scholars like Wendy Harcourt have instead focused the attention on a reflection of the notion of participation and empowerment through technology. As Wendy Chun explains in her review of the differing perspectives of academics and activists toward Computer Mediated Communication (CMC), the Internet and CMC were construed as finally opening the doors to a gender-free and race-free digital world,¹²² "a

¹¹⁹ Lawley Lane, Elizabeth. "Computers and the Communication of Gender." April 1993. [Online]. Available at: <http://www.itcs.com/elawley/gender.html>. Last accessed 15 August 2013.

¹²⁰ Ruth, Hubbard. "Foreword." Rothschild, Joanne. *Machina ex dea: Feminist perspectives on technology*, New York: Pergamon Press, 1983, vii-viii.

¹²¹ Lawley Lane, Elizabeth. "Computers and the Communication of Gender".

¹²² Chun, Hui Kyong Wendy. *Control and Freedom: Power and Paranoia in the Age of Fiber Optics*, Cambridge, MA: MIT Press, 2006.

metonym, [...] a matrix of embedded practices and representations.”¹²³ Cyberfeminism and enthusiastic accounts of how technologies were to change the concept of the woman making gender disappear mushroomed.¹²⁴

If cyber-enthusiasts such as Wendy Harcourt and Middle Eastern scholars and intellectuals such as Fatima Mernissi, Nawal Al Sadaawi, and Naomi Sakr saw in media (particularly the Internet) new frontiers of empowerment and freedom,¹²⁵ less enthusiastic accounts of the Internet have been offered by third world feminism with regards to their colonising power, without neglecting their positive impact on grass root movements.¹²⁶

I will focus on the contribution to the discussion of a techno-human assemblage offered by feminist and philosopher Donna Haraway in ‘A Cyborg Manifesto’. In her Manifesto, Haraway claims to be “ironic” and discusses “feminism, socialism and materialism”.¹²⁷ Rather than looking at the usages and the effects of technology and science, the intermingled materialism of technology and the embedded practices that allow prenatal

¹²³ Bell, David. *Cyberculture Theorists: Manuel Castells and Donna Haraway*, Oxon: Routledge Critical Thinkers, 2007, 5.

¹²⁴ Wolmark, Jenny. (ed). *Cybersexualities: A Reader on Feminist Theory, Cyborgs, and Cyberspace*, Edinburgh: Edinburgh University Press, 2000.

¹²⁵ Wendy, Harcourt. (ed). *Women@Internet: Creating New Cultures in Cyberspace*. London: Zed Books, 1999;

Mernissi, Fatima, *Karawan. Dal Deserto Al Web*, Firenze: IT, Giunti Editore, 2004.

Sakr, Naomi, (ed). *Women and Media in the Middle East: Empowerment through Self-expression*, London, IB Tauris, 2007.

¹²⁶ Mitter Swasti & Rowbotham Sheila, (eds), *Women encounter technology: Changing Patterns of Employment in the Third World*, London: Routledge, 1995. [Online]. Available at <<http://archive.unu.edu/unupress/unupbooks/uu37we/uu37we00.htm#Contents>>. Last accessed 21 March 2015.

¹²⁷ Haraway Donna. “A Cyborg Manifesto, Science, Technology, and Socialist-Feminism in the Late Twentieth Century.” Kaplan, David M. (ed). *Readings in Philosophy of Technology*, Oxford: Rowman & Littlefield Publishers, 2004, 161-178.

scans to 'make' the foetus are highlighted and discussed. The cyborg is "troubling boundaries that have worked for so long to keep everything in its place."¹²⁸ Haraway's cyborg is a creature living "in a post-gender world", a creature without history in the "Western humanist sense", which depends on "the myth of original unity, fullness, bliss [...] represented by the phallic mother from whom all humans separate."¹²⁹

Haraway's Manifesto could be intended as an invite to rethink categories and look for "coalition, affinity" rather than "identity". As in many of her books, Haraway calls for technoscience and envisions an era of networks rather than hierarchical domination, where divides and boundaries are replaced by blurred categories.

Haraway's work, her Manifesto but also her study of primates and technoscience, helps reinstate my overall position of the dynamic and fluid approach to women's issues. I don't claim the equivalence of cyborg and technowomen but the Manifesto as well as her 'trilogy' has helped my concept of technowomen.

The technowomen I have seen emerging through technology and with technology emerge as a composite reality where agency is also distributed by code and where Open Graph APIs give information on their activities, and Google Place APIs allows for their life stories to materialise and emerge in a defined and definite space. Technowomen therefore emerge through software that "[...] concatenates every single value, no matter how trivial, in relationships that are essentially social, (*and*) communicative [...]."¹³⁰ The thesis' starting point is the recognition of

¹²⁸ Bell, David. *Cyberculture Theorists: Manuel Castells and Donna Haraway*, 115.

¹²⁹ Haraway, Donna. "A Cyborg Manifesto." Kaplan, David M. (ed). *Readings in Philosophy of Technology*, 166.

¹³⁰ Mackenzie, Adrian. "Internationalization." Fuller, Matthew (ed). *Software Studies, A Lexicon*, Cambridge, MA: MIT Press, 2006, 153-160, 157.

technology's pervasiveness; following Haraway's analytical presentation of the cyborg, it need be reiterated that enlisting women's issues into established theoretical frameworks would be a rather arid exercise. Haraway's idea of the cyborg, the concepts of the multi-layered map, network, issue, and DingPolitik lead to reinforce relevance of multiplicity of loci or "geometries of difference and contradiction crucial to women's cyborg identities";¹³¹ to survive, such very complex hybrid and multi-layered network must engage in a constant process of forming new relations.

¹³¹ As Haraway concludes in fact, "cyborg imagery can suggest a way out of the maze of dualisms in which we have explained our bodies and our tools to ourselves. This [...] means both building and destroying machines, identities, categories, relationships, space stories. Though both are bound in the spiral dance". Haraway, Donna. "A Cyborg Manifesto." Kaplan, David M. (ed). *Readings in Philosophy of Technology*, 170 and 175.

1.7 Conclusion

The considerations made so far offer the possibility to reflect more on the concept of the network as a “mode of enquiry,” “a powerful way of rephrasing basic issues of social theory, epistemology and philosophy”¹³² and on that of agency here intended as the surfacing of improbable actors in the “making of”¹³³ women’s issues.

The multi-layered network approach that I will embrace to map women’s issues will not stop only at the analysis of how technologies and women intersect; the network as a mode of enquiry will help me follow actants present in a complex and multi-layered reality where statements, political, and social contexts mix and enmesh with explanations of Qur’anic reading and misreading. I will look into the making of women’s issues as happened in the past without necessarily following a linear approach to history; rather, the entangled nature of the making of women’s issues and women’s issues discourses will be privileged.

This chapter has traced an analysis of accounts of technology, feminist interpretations of technology, and alternative ways of looking at the relation between human and technological agency. I have looked into the key points of feminist accounts of technology and into the concept of the cyborg as proposed by Haraway. The clarifications of how I will map women’s issues as emerging online will not neglect, as argued, an analysis of what is not online, thus stories, histories, and accounts of women’s issues in the two countries. On the contrary, these different layers and actants will

¹³² Latour, Bruno. “Networks, Societies, Spheres: Reflections of an Actor-Network Theorist.” *International Journal of Communication* 5, 2011, 796-801, 796.

¹³³ Latour, Bruno. *Reassembling the Social: An Introduction to Actor-network Theory*. Oxford: Oxford University Press, 2005, 88-89.

make the multi-layered map. This choice, I argue, should avoid risks of universal truths or hopes of a digital world that makes a gender-free body possible and leads to gender-free practices.

I have built upon the ideologies and propositions presented and discussed in this chapter to justify my idea of the technowomen, a reality that emerges when technologies are recognised as having some agency and become actants able to generate new identities. As I repeatedly state in the course of this research, women's issues (in the many alterations of gender issues, or sex issues) have been taken as a one term, one set of problematic topics common to women across the globe, recognising how certain topics might be more relevant in one country rather than another. Although this is not wrong, my question rather wants to be about what it is that constitutes an issue for women and how have women (and men) assembled around the issue? Was it disagreement? What sort of negotiations but, most importantly, how multiple is the life that one issue (i.e., the veil) has?

The next chapter will start mapping the multi-layered network I have in mind through the analysis of Islamic feminists, Islamic scholars, 'liars', and 'impostors' -as Mernissi calls the many men that revisited Muhammad's Ahadith-¹³⁴ feminists and activists that contributed to the multiple lives of a single issue and to the multiple reality of women's issues in Egypt and Saudi Arabia.

¹³⁴ Mernissi, Fatima. *The Veil And The Male Elite: A Feminist Interpretation Of Women's Rights In Islam*, Abingdon: Perseus Books Publishing, 1991.

Chapter 2: Women, media and the Qur'an: Women's issues and Islam

2.1 Introduction

The previous chapter has elucidated concepts of technowomen, issue, and multi-layered network. Western feminist views of women and technologies have been discussed, focusing particularly on Donna Haraway and her concept of the cyborg as overcoming the dichotomy between subject and object. I have concluded by arguing for a network approach to women's issues that would offer a better and in-depth understanding of their complexity and multiplicity.

In this chapter I will apply the concept of the network, seen as a complex set of relations formed between different actants, to an analysis of discussions on the representation of the Muslim woman. Although I am aware of the questions the choice of the term representation can raise, it nevertheless emerges in feminist works of third world feminists, and scholars of the Middle East in relation to media, cultural, and religious heritage within the Arab world, and colonial and anti-colonial rhetoric. The concept of representation of the Muslim woman builds up an important layer, because it is rooted in traditional practices, religious teachings, and legal requirements but also Western rhetoric of an Arab world clung into medieval beliefs.

I will particularly focus on the concept of representation, proposed by third world feminists and a theoretical corpus that includes works from Chandra T. Mohanty, Fatima Mernissi, Mounira Charrad, and Susan Muhaddi Darraji.¹³⁵ A discussion on the representation of the Muslim woman cannot

¹³⁵ Charrad, Mounira. *States and women's rights: the making of post-colonial Tunisia, Algeria and Morocco*, Berkley, CA: University of California Press, 2001;

Darraj, Susan M. "Understanding the Other Sister: The case of Arab Feminism." *Monthly Review, an Independent Socialist Magazine*, Vol.53, Issue 10, 2002, [Online]. Available at:

go without one of colonialism, colonial literature, and anti-colonial rhetoric. For this reason, I will see how the concept of representation emerges through these sources that have been interpreted and explained, opposed, and offered an alternative.

However, I will also present discussions on early Islamic literature, Ahadith, proverbs, and legal and cultural practices deemed (or accused to be) gender-biased. How have women been portrayed in Islamic literature, proverbs, and traditional practices? How does a reflection on women's representation contribute to the construction of a map on women's issues? I will refer to secondary sources and highlight how, in this complex layer in which representation is negotiated as a term and a concept, seemingly insignificant elements such as accents, multiple translations, or allegedly false Ahadith can become important political actants in mapping the women's issues' multi-layered network.

Questions and critiques of representation go hand in hand with media theory. How does the concept of representation change when it meets with reflections on media technologies? To attend to these questions I will look into the work of Robin Lee Riley on the representation of the

<<http://monthlyreview.org/2002/03/01/understanding-the-other-sister-the-case-of-arab-feminism/>>. Last accessed 15 January 2015;

Keddie, Nikki R. *Women in the Middle East, past and present*, Princeton, NJ: Princeton University Press;

Mernissi, Fatima. *Beyond the Veil. Male-Female Dynamics in Modern Muslim Society*, Bloomington: IN, Indiana University Press, 1987;

Mernissi, Fatima. *The Harem Within. Tales of a Moroccan Childhood*, London: Penguin Books, 1991;

Mernissi, Fatima. *The Veil and The Male Elite: A Feminist Interpretation of Women's Rights In Islam*, Abingdon: Perseus Books Publishing, 1991;

Mernissi, Fatima, *Karawan. Dal Deserto Al Web*, Firenze: Giunti Editore, 2004;

Mernissi, Fatima. *Scheherazade goes West. Different Cultures, Different Harems*, New York: Washington Square Press, 2004;

Mohanty, Chandra, T. *Feminism Without Borders: Decolonising, Practicing Solidarity*, London: Duke University Press, 2003. 17-42.

Muslim woman in American Television.¹³⁶ I will also refer to The Arab Human Development Report edited by the United Nations Development Programme (2005 and 2009).¹³⁷

This section will also touch upon the hopes and disillusion of the Internet and Social Media through the works of Deborah Wheeler, Annabelle Sreberny, and activists such as Nawal Al Sadaawi as well as blogger Saudiwoman. In particular, I will discuss how the hopes of possible women's Counter-publics or a public sphere that would witness women's participation have clashed against the wall of filtering, control, and fear of being punished. At the same time, I will also look at how the discourses of women and digital media in a Middle Eastern context have focused on concepts such as empowerment, liberation, and democratic potentials.

The aim of this chapter is to show how all of the above oppositions, struggles, questions, and beliefs around the concept of the "representation of the Muslim woman" become important actants in the making of the map of women's issues.

2.2 Harems, Odalisques, and Orientalist discourses of gender

Egypt and Saudi Arabia are two influential countries whose media landscape and histories of women's activities and activism differ greatly. One underlying problem I argue, an important issue that cannot be

¹³⁶ Riley Lee, Robin. *Depicting the Veil: Transnational Sexism and the War on Terror*, London: Zed Books, 2013.

¹³⁷ United Nations Development Programme - Regional Bureau for Arab States. *The Arab Human Development Report 2005. The rise of Women in the Arab World*, New York: United Nations Publications, 2006;

United Nations Development Programme - Regional Bureau for Arab States. *The Arab Human Development Report 2009. Challenges to Human Security in Arab Countries*, New York: United Nations Publications, 2009.

neglected in the making of the multi-layered network, is an Orientalist approach to the Muslim woman that third world feminists and scholars of the Middle East have debated and tried to eradicate, vindicating women's inner differences.

Scholars like Chandra Mohanty or Susan Muhaddi Darraj¹³⁸ have worked toward such eradication opposing and comparing a 'real' Muslim woman to a 'represented' one.

Representation as discussed by Chandra T. Mohanty and other scholars such as Robin Lee Riley and Susan Muhaddi Darraj but also Fatima Mernissi¹³⁹ refers to the troublesome topic and troubling issue of Western culture's imagery of Muslim women and, in broader terms, of the third world woman. Chandra T. Mohanty, Robin Lee Riley, and Minnie Bruce Pratt have compiled studies and analyses of representation of the third world woman and the Muslim woman in line with rhetoric of Western liberation that "continues to use gender, race, [...] sexuality [...] and even invokes 'women's liberation' to continue and legitimise [...]" occupations and wars.¹⁴⁰

The question of representation as proposed by these scholars, involves—at a closer look—stories, and socio-economic factors that enmesh, forming an entangled network where statements meet with images and paintings, poems and politics of control, anti-colonial rhetoric, and

¹³⁸ Darraj, Susan M. "Understanding the Other Sister: The case of Arab Feminism." *Monthly Review, an Independent Socialist Magazine*, Vol.53, Issue 10, 2002, [Online]. Available at: <<http://monthlyreview.org/2002/03/01/understanding-the-other-sister-the-case-of-arab-feminism/>>. Last accessed 15 January 2015;

Mohanty, Chandra, T. *Feminism Without Borders: Decolonising, Practicing Solidarity*, London: Duke University Press, 2003. 17-42.

¹³⁹ Mernissi, Fatima. *Scheherazade goes West. Different Cultures, Different Harems*, New York: Washington Square Press, 2004.

¹⁴⁰ Mohanty, Chandra T., Riley, Robin Lee and Bruce-Pratt, Minnie *Feminism and War: Confronting US Imperialism*, London: ZED Publication 2008, 2. The book wants to be a map of the ways "the USA has gendered, racialized and sexualized its practices of imperialist wars [...]", 3.

resistance. In fact, portraits of Islamic societies and Muslim women can be found in literature and diaries of British writers and travellers from the 18th century.¹⁴¹

In the colonial literature from this historical period, it is not unusual to see how the backwardness and unsuitability of Islam are best exemplified by recalling the image of women in Islamic societies. Although stories and tales of exotic destinations had existed for centuries, eighteenth-century travel narratives proved unique and the sheer number of books published surpassed those of previous centuries. One of the reasons that could be listed for such richness is technological development as well as “the scientific spirit of the age”, the quest for knowledge and, also, higher schooling levels across Europe.¹⁴² In addition to this, improvements in roads, faster carriages and more frequent ships to exotic destinations made traveling a ‘mass phenomenon’, no longer an exclusive opportunity for soldiers and explorers.

Lord Byron’s poem *The Giaour* presents a weak woman, Leila, trapped in a harem, and viciously killed for falling in love with the infidel (Giaour, or Gâvur, is the Turkish pejorative term for infidel).¹⁴³ This image of the Muslim woman started to carry with it a political meaning, a projection of an enslaving Islamic world clinging to a medieval culture whose main characteristics were patriarchy and despotism of men over women. To this, a portrait of woman as sexual object must be added.

The woman and her position of inferiority in Muslim contexts can be also caught in the writings of Lady Mary Worley Montagu and Elizabeth

¹⁴¹ Keddie, Nikki R. *Women in the Middle East, past and present*, 14-16.

¹⁴² LaBlanc, Michael L. (Ed.). “Eighteenth Century Travel Narratives- Introduction.” *Literary Criticism (1400-1800)*, Vol. 77. Gale Cengage 2002. [Online]. Available at: <<http://www.enotes.com/topics/eighteenth-century-travel-narratives#critical-essays-eighteenth-century-travel-narratives-introduction>>. Last accessed 8 July 2015.

¹⁴³ George Gordon Byron, *The Giaour. A Fragment of a Turkish Tale*, NP: Forgotten Books, 2012.

Craven, and their depictions of women in Turkish harems. Where Montagu's 'Embassy Letters', written between 1716 and 1718, depicted Turkish harems, Elizabeth Craven's *A Journey through the Crimea to Constantinople*, written around 1789, described the Turkish Empire as crumbling and depraved. Lady Montagu has been analysed by several scholars because of her attempt, through the original literary style of the epistulae, to offer an ethnographic account of the life of women in the harems. Her aim was to bring down the orientalist visions of men writers who, as Elizabeth Bohls observes, could only write fantasy stories, because they were not granted access to these hidden places.¹⁴⁴ Bohls, however, observed that although Montagu succeeded in de-sexualising the Middle Eastern woman, her ethnographic research is replete with orientalist statements, because her attempt to legitimise Middle Eastern women materialises through their Westernisation. As Bohls notices in fact, Montagu used metaphors that likened Turkish women to European works of art in an attempt to "rescue" them "from their representation as exotic sex objects [...]" with the effect of casting "[...] them as objects and not subjects of a gaze" failing to recognise them any form of agency, which was—according to Bohls—Montagu's original goal.¹⁴⁵

In early colonial literature the 'Muslim woman' was therefore one monolithic term and a unified concept with no agency. However, this biased interpretation perpetuated; 19th Century's novels and accounts, and artistic representations of cultural exchanges between European powers and Middle Eastern countries shed a light on a sexualised representation of the woman, which was interchangeably addressed as Muslim or Arab.¹⁴⁶ The

¹⁴⁴ Bohls, Elizabeth A. "Aesthetics and Orientalism in Lady Mary Wortley Montagu's Letters." *Studies in Eighteenth-Century Culture*, Vol. 23, 1994, 179-205.

¹⁴⁵ Bohls, Elizabeth A. "Aesthetics and Orientalism." 190.

¹⁴⁶ Keddie Nikki R. *Women in the Middle East, past and present*, 57-59;

Ahmed, Leilah. *Women and Gender in Islam*, New Haven, CT: Yale University Press, 1992, 34-39;

paintings of these important times of cultural and commercial exchange are explicative of the representation of a woman as a slave, or favourite of a master and in a harem.¹⁴⁷ Edward Said analysed how the gender discourses fuelled a colonial and imperialistic design of domination that presented the Orient as “an exclusively male province” where men travelers met with their fears of women who were but “creature[s] of male-power fantasies.”¹⁴⁸

The relations between the West and the East certainly reached a peak in the 20th century, and generalisations were again used by European powers interested in gaining control over the Middle Eastern region; by highlighting the inferiority of Islam the need for Western civilisation could therefore be declared.¹⁴⁹ Fatima Mernissi reflects on these clichés in two works, *Scheherazade goes West* and *the Harem Within*.¹⁵⁰ Both are written in the style of a novel and, in both, Mernissi reflects on the misconception of the Muslim woman as perceived and depicted by Westerners and in the harem.

In *Scheherazade goes West*, Mernissi offers an analysis of Scheherazade, the heroine that tells stories to her soul mate to escape certain death. It is not

Lockman, Zachary. *Contending Visions of the Middle East: the history and politics of Orientalism*, Cambridge: Cambridge University Press, 1994, 182-214.

¹⁴⁷ Orientalist Painter Giulio Rosati offers interesting examples of women as chosen by masters, slaves and sexual objects. As Montagu discussed in her many epistolae, men had no access to harems or women baths so their accounts and romantic representations of such places were pure imagination.

¹⁴⁸ Said, Edward. *Orientalism*, London: Penguin Book, 1990, 95.

¹⁴⁹ Tucker, Judith E. *Arab Women: Old Boundaries, New Frontiers*, Bloomington, IN: Indiana University Press, 1993. Also cited in Korteweg, Anna C. and Ray, Raka. “Women’s movements in the third world: identity, mobilization and autonomy.” *Annual Review of Sociology*, Vol.25, 1999, 47-71.

¹⁵⁰ Mernissi, Fatima. *Scheherazade goes West: Different Cultures Different Harems*, New York: Washington Square Press, 2001;

Mernissi, Fatima. *The Harem Within. Tales of a Moroccan Childhood*, London: Penguin Books, 1991.

so much her comparison between the Western idea of women in the harem and the 'real' women in the harem that is of interest. Rather, it is her analysis of the debate of male vs. female in early Islamic imagery and its clashes with the romantic paintings of odalisques realised to satisfy a Western imagery instead. Mernissi in fact contends that contrary to what 'Westerners' think, the woman in an early Islamic context is seen as intellectually dangerous. Her body is not once mentioned in the Arabic tradition of *The One Thousand and One Nights*, if not in very specific parts of the long collection of tales told by Scheherazade. Rather, Scheherazade's intellectuality, her immense knowledge, and poor inclination to subordination are exalted because "[...] the Oriental Scheherazade is purely cerebral, and that is the essence of her sexual attraction."¹⁵¹ It is this cerebral power, Mernissi continues, that makes every political outcry for reformism and objection to despotic power a "woman's matter" or the reason why "regardless of where you are [...] when you zap through Muslim television [...] the debate on democracy soon drifts into a debate on women's rights and vice versa."¹⁵²

Muslim woman in Islamic literature, Mernissi maintains, is portrayed as uncontrollable and tactical, good at playing tricks and subjugating the man without violence or force; it is from that uncontrollable and highly intellectual power that stems the perception of the man's need to control the woman. As early as 1899, feminist historian and revisionist (and Islamic judge) Qasim Amin argued that covering (veiling) a woman and denying her education was not so much a tribal requirement or a matter of Sacred Law (Shari'a) or a requirement of the Prophet. Women's subjugation and their seclusion were rather seen as a desperate response to man's incapability of facing an intellectual peer in the household and men's complete lack of self-control. Despite the mixed feelings that some Arabic and Middle Eastern feminists have

¹⁵¹ Mernissi, Fatima *Scheherazade goes West: Different Cultures Different Harems*, 39.

¹⁵² Mernissi, Fatima. *Scheherazade goes West: Different Cultures Different Harems*, 51.

for Qasim Amin, his idea of “veiling the man”¹⁵³ is close to Mernissi’s explanation of Scheherazade and her warfare-like tactics.

In *The Harem Within*, instead, Mernissi discusses French occupation and the changes it brought in terms of education for women; she tells the tales of her paternal harem, where she grew up as a child, as opposed to the maternal harem she used to visit and shows how the idea of a golden prison changes its meaning dramatically. Whereas the Western idea of a harem in colonial literature and cultural expressions was that of defenceless wives and concubines, the harems Mernissi describes are not oblivious to the changes the country was going through including those technological changes that women embraced after silent but stubborn fights with traditional beliefs. Mernissi sheds light on the political misunderstanding of the harem and its urban settings. Her writings unveil the harem and the lives of women and men who were forced to keep appearances within the harem and outside of it in times where Morocco was going through resistance to French occupation, Westernisation, and profound economic changes. Despite these appearances, the harems she describes were portrayed as very relaxed places where women formed alliances, negotiated their positions, and accessed technologies in function of and relation to their ‘seniority.’ Mernissi talks about the harem as a prison in terms of lack of freedom from the extended family and lack of freedom to leave the enclosed world of women. The tales of a harem she tells are very different from the portrait of an abundance of libido Western paintings of the Odalisque suggested.

2.3 Qur’an, Ahadith, and proverbs: Feminist readings and discussions

¹⁵³ Qasim Amin. *The Liberation of the Woman and The New Woman. Two documents in the History of Egyptian Feminism*, Cairo: The American University in Cairo, 2000, 49.

Questions of the represented Muslim woman as opposed to a real one can also be found in the rich plethora of Islamic feminist scholars and their close readings of the Qur'an and the message of the Text. Amongst these, it is possible to mention Amina Wadud who reflected upon the literary meaning of specific words within the Text, or Asma Barlas, who instead offered a feminist reading of the Qur'an—reflecting the Text's interpretative flexibility.¹⁵⁴ These readings and new interpretations of problematic verses of the Qur'an (suras or sūwar) and false deeds and sayings of the Prophet (Hadiths or Ahadith), I argue, add complexity to an analysis of the concept of representation as intended and put forward by the discussed positions. In this section I will analyse some of these aspects and introduce the key issues that emerge out of these discussions.

2.3.1 An Nisa' and male guardianship in the Qur'an

One of the issues that emerges in the works of feminists and Islamic scholars—and a topic that will be discussed with regards to the Saudi blogosphere—is the *qawama* (the guardian/guardianship), which is a father, a brother, or even an uncle that makes decisions on behalf of a woman. The term *qawama* can be found in sūra 4:34 (*An-Nisa'*), and scholars and feminists have

¹⁵⁴ Al-Munajjed, Mona. *Women in Saudi Arabia speak: 24 Remarkable Women Tell Their Success Stories*, Amman: Arab Institute for Research and Publishing, 2006;

Barlas, Asma. *Believing Women in Islam: Unreading Patriarchal Interpretations of the Qur'ān*, Austin: University of Texas Press, 2002;

Mernissi, Fatima. *The Veil And The Male Elite: A Feminist Interpretation Of Women's Rights In Islam*, Abingdon: Perseus Books Publishing, 1991.

Stowasser, Barbara F. *Women in the Qur'an: Traditions and Interpretations*, Oxford: Oxford University Press, 1996;

Wadud, Amina. *Qur'ān and Woman: Rereading the Sacred Text from a Woman's Perspective*, Oxford: Oxford University press, 1999.

subjected it to attentive scrutiny and put it in context of other suwar and historical contingencies.¹⁵⁵ The word is an issue per se, since it has stirred up debates and discussions on its meaning, and its relation to and effects on women's status.

The term, its consequences, and the discussions and analyses that emerge around it make *qawama* a first issue that deserves attention. This issue cuts through many layers; it is a linguistic and translation issue linked to social and patriarchal settings and a controversial topic in the application of the Shari'a; it also becomes an every-day battle for women in countries like Saudi Arabia.

The issue is firstly a matter of linguistics. Fatima Mernissi and Amina Wadud argue that when sūra 4:34 is considered as having force of Law—as it has — a question of validity rises, especially when the sūra is analysed in light of other sūwar such as sūra 33:36 on equality. However, Tamara Sonn highlights the difference between the description and the prescription of the Qur'an or how women and men are morally equal (so how sūra 33:36 is morally binding) but, on the other side, how the political, economic, social (hence patriarchal) context have influenced the Holy Text; this flexibility only can be explained referring to what the scholar calls the "prescription" of the Qur'an, thus explaining the legal validity of sūra 4:34.¹⁵⁶

¹⁵⁵ "Men are in charge [*qawama*] of women by [right of] what Allah has given one over the other and what they spend [for maintenance] from their wealth. So righteous women are devoutly obedient, guarding in [the husband's] absence what Allah would have them guard. But those [wives] from whom you fear arrogance - [first] advise them; [then if they persist], forsake them in bed; and [finally], strike them. But if they obey you [once more], seek no means against them. Indeed, Allah is ever Exalted and Grand." (Qur'an 4:34). A full explanation of *qawama* can be found in Abdullahi, Ahmed An-Na'im. "Dossier 14-15: Islam and Women's Rights: A Case Study." *WLUML Dossier*, 1996. Available at: < <http://www.wluml.org/node/269>>. Last retrieved 2 April 2014.

¹⁵⁶ Sonn, Tamara. "Introducing." Rippin, Andrew (ed). *The Blackwell Companion to the Qur'an*, London: Wiley-Blackwell, 2006, 3-18, 14.

Like Mernissi, Amina Wadud focuses on linguistics but rather than undertaking an analysis of the *suwar*, she questions the meaning of terms, words, and compounds. The first term she questions is *qawwamuna 'ala* (God having preference of some over others), specifically with regard to the term *faddala* (very similar to another term I will investigate later, *daraja* in *sūra* 2:228). Preference (*qawwamuna 'ala*) doesn't refer, Wadud argues, to an unconditional preference of males over females; "the Qur'ān must be eternally reviewed with regards to human exchange and mutual responsibility between males and females."¹⁵⁷ In her view in fact, the Text's version of "creation of human kind is not expressed in gender terms."¹⁵⁸ On the contrary, she argues, "[...] *Sūra* 4:34 does not read "they (masculine plural) are preferred over them (feminine plural)."¹⁵⁹ Other questions around the term *qawwama* and *faddala* also pertain to their application, bringing the debate onto a question of absolute validity of men's preference over women as opposed to specific marital situations where husbands—providing for wives financial well-being—have preference in the eyes of Allah.¹⁶⁰

Qawama, Wadud continues, must also be seen as an issue of nomenclature and a social practice. In *sūra* 33:5 in fact, the Qur'ān sets out the patrilineal architecture of the family, inciting anyone to be addressed according to "the name of their fathers" but also addressing women in light of their relationship with men. The Qur'ān or the Ahadith doesn't use women's names but addresses them as daughters of, wives of, sisters of, with the only exception of St. Mary. Rather than looking at nomenclature as a way of undermining woman's agency, Wadud highlights how addressing women by their father's

¹⁵⁷ Wadud, Amina. *Qur'ān and Woman: Rereading the Sacred Text from a Woman's Perspective*, 73.

¹⁵⁸ Wadud, Amina. *Qur'ān and Woman: Rereading the Sacred Text from a Woman's Perspective*, 20.

¹⁵⁹ Wadud, Amina. *Qur'ān and Woman: Rereading the Sacred Text from a Woman's Perspective*, 20.

¹⁶⁰ Wadud-Muhsi, Amina. "Qur'an and Woman." Kurzman, Charles(ed). *Liberal Islam, a Sourcebook*, Oxford: The Oxford University Press, 1998, 136-137.

name represents a form of respect and a way of confirming kin relations. Wadud, basing her analysis on Sayyid Qutb, highlights how addressing women not by their first names but by their family name was, and still is in some parts of the Mediterranean, a matter of respect for the woman.¹⁶¹ The woman, Wadud adds, is considered spiritually as an individual (*nafs*) but also as part of her socio-cultural group, and the Qur'ān recognises these elements.

The issue (*qawama*) also enters into the everyday lives of men and women in Egypt and Saudi Arabia and becomes multiple in the two countries, giving way to different discourses, battles, and activities.

In Egypt guardianship assumes the meaning of custody over children and decisions over their lives and happiness.¹⁶² In the Egyptian Family Law, guardianship is granted to the mother (and her relatives) until the child reaches the age of fifteen. I will discuss this specific aspect, an issue per se, in the next chapter, when the Egyptian Personal Status Law will be considered along with some specific articles. The issue itself is not as prominent in feminist discussions in Egypt;¹⁶³ however it has emerged on different occasions during and, most importantly, after the revolution. During the Arab Spring, Egyptian fathers (10 in total) organized a demonstration to ask the government to change the law that grants mothers sole custody and allows weekly visits of a minimum of three hours. This demonstration, the “Egyptian Men Revolution Movement,” has received very little media coverage, and it is absent from Egyptian blogs as well as social media. What has instead received attention is

¹⁶¹ Wadud, Amina. *Qur'ān and Woman: Rereading the Sacred Text from a Woman's Perspective*, 72.

¹⁶² Shukralla, Salma. “Egyptian men’s revolution stage demonstration for child custody.” *AhramOnline*, 21 July 2011. [Online] < <http://english.ahram.org.eg/NewsContent/1/64/14759/Egypt/Politics-/Egyptian-men's-revolution-stage-demonstration-for-.aspx> >.

¹⁶³ The issue of custody has become controversial, as I will explain, because the amendments to the personal status law in Egypt received a strong input during Nasserism and Sadat. During Mubarak’s regime, Suzanne Mubarak promoted the law that allows mothers to have custody. However, this law –along with all other amendments – has been accused of being the byproduct of Mubarak’s vicinity to the West. All this will be discussed in the next chapter.

the proposal to make amendments to child custody,¹⁶⁴ sparking feminist criticism and indignation. Guardianship in its meaning of child custody has thus become centre of a new nationalistic discourse. At the same time, the revolution has also brought to the foreground the issue of guardianship as control of the man over the woman. In early 2012 in fact, women's organisations and activists denounced the appearance of conservative trends in public spaces where guardians were required, and where episodes of violence or harassment were linked to the lack of guardianship or on women's Westernised attitudes.¹⁶⁵ Guardianship in Egypt is therefore a very complex issue where nationalism, feminism, fathers' rights, but also anti-Western rhetoric enmesh to generate a rather entangled network.

In Saudi Arabia, instead, the term *mahram* (guardian) is associated with very strict and legally binding requirements. Saudi women cannot leave their homes without the permission of a male relative. Saudi women (including expat women living on Saudi soil)¹⁶⁶ cannot open a bank account, cannot work or leave the country without the permission of a guardian.¹⁶⁷ Those younger than 45 years can only travel if accompanied by a chaperone or a male relative. Women are not allowed to own a passport, and when owning one, pictures can

¹⁶⁴ Soon after the Egyptian Revolution projects to make amendments to this law proposed to award children over 8 to divorced fathers. No further information is available on the progress of this project to date. Gomez-Rias, Carmelo. "Women, Shari'a, and Personal Status Law Reform in Egypt after the Revolution." *Middle East Institute*. [Online]. Available at: <<http://www.mei.edu/content/women-shari'-and-personal-status-law-reform-egypt-after-revolution#edn9>>. Last accessed 21 March 2015.

¹⁶⁵ Ramdani, Nabila. "Egyptian Women: 'They were doing better under Mubarak.'" *The Guardian*, 4 June 2012 [Online]. Available at: <<http://www.theguardian.com/world/2012/jun/04/egyptian-women-better-under-mubarak>>. Last accessed 21 March 2015.

¹⁶⁶ Before 2011 all expats were exempted from having a mahram to leave the country or work. A new law was passed that extended the requirement of a mahram to all expats exception made for British and American women. The law sparked after a Canadian woman living in Saudi Arabia was stopped at the Abu Dhabi airport and made choose between prison and a trip back to Jeddah because traveling alone. Nihal, Mariam. "Mahram Law heaps frustration on women." *Arab News*, 23 April 2011. [Online]. Available at <<http://www.arabnews.com/node/375267>>. Last accessed 3 April 2013.

¹⁶⁷ Men and women both have mahram and it is not just prescribed to women but also to men (a mother can be a mahram to a certain extent); it is almost impossible to offer a complete list of mahram because in some cases the role of the mahram extend to the extended family and assumes different 'degrees' of relevance in cases of adoptions and divorces.

only be authorised by a male guardian. The institution of the male guardian has thus reached rather extreme applications in the Kingdom, and women have started to campaign for more freedom.

Guardianship and Qawama is a pungent issue, one that doesn't only touch upon a social and political layer but also on an economic one. Looking specifically into the case of Saudi Arabia in fact, the spread of higher education for girls and the increased attendance in private schools has created a situation where women's curricula, previously based on religious knowledge only, have reached high standards and new graduates enter the job market every year. These new talents cannot find space in the job market because of the institution of the figure of the guardian but also the ban in gender mixing that I will discuss in the next chapter. The repercussions of this issue has been tackled by activists such as Wajeha al-Huwaider (discussed later on) but also by non-activist women who have found their ways, from the Internet to organising campaigns, to challenge the government and the social acceptability of women's perceived permanent inferiority.

Although it is impossible to argue that the interpretations of *qawama* and *mahram* caused the ban on Saudi Arabian women owning their own passports, it is indeed interesting to notice how the same issue becomes multiple when different layers are investigated; the discourses that emerge and are formed around the *qawama* multiply and also polarise around certain positions, forming a complex and multi-layered network where *qawama* is an issue that interests and involves different actants, some of which gain more prominence than others. Qawama contributes to and sits within the layer of representation of the Muslim woman because, as the explanations have shown, it has been used, rejected, and questioned; it is simultaneously a fundamental actant in understanding the issue of representation as opposed and discussed by feminists and Middle Eastern

theorists like Said, and a network in a continuous process of translation and rupture of “one thing” into “something else distinctive.”¹⁶⁸

2.3.2 Daraja, veil, and false prophecies.

The terminological and social meanings carried by *qawama* and the related sūra 4:34 (also called the ‘beating wife’ verse) also can be found in the term *darajah*, as found in sura 2:228, (or the ‘degree over’ verse), in sūra 24:31 (on clothing and veiling requirements) and in sūra 33:33 (on seclusion and staying in the house).¹⁶⁹

Daraja is found in many verses of the Qur’an as a noun (singular and plural) and a verb, each time having a different meaning. Specifically, in sura 2:228 the term has been translated as “having degree over.”¹⁷⁰ Wadud points out that ‘*darajah*’ is never used in the Qur’ān to highlight the physical and biological superiority of the man over the woman; rather, on the contrary, it is used to indicate how degree can be acquired through good deeds.¹⁷¹ Other interpretations have instead highlighted the verse’s reference to divorce and financial support, hence the financial degree (of responsibility) of the man over

¹⁶⁸ Murphy, Peter. “Topeme: Truth. Topology. Cartography. Ana|logy.” Paper presented at *The Hydra Project: Morphology, topology, and artifice: cartographical aesthetics and an architecture of the event*. The Royal Danish Academy of Fine Arts Schools of Architecture, Design and Conservation Study Department, 22-23 May 2014. [Online]. Available at <<http://www.karch.dk/hydra/Materiale/Myrphyabstract>>. Last accessed 21 March 2015.

¹⁶⁹ Stowasser Freyer, Barbara. “Liberated Equal or Protected Dependent? Contemporary Religious Paradigms on Women's Status in Islam.” *Arab Studies Quarterly* Vol. 9, No. 3, Summer 1987, pp. 260-283, 262.

¹⁷⁰ “And divorced women shall wait (as regards their marriage) for three menstrual periods, and it is not lawful for them to conceal what Allah has created in their wombs, if they believe in Allah and the Last Day. And their husbands have the better right to take them back in that period, if they wish for reconciliation. And they (women) have rights (over their husbands as regards living expenses, etc.) similar (to those of their husbands) over them (as regards obedience and respect, etc.) to what is reasonable, but men have a degree (of responsibility) over them. And Allah is All-Mighty, All-Wise.”

¹⁷¹ Wadud, Amina. *Qur’ān and Woman: Rereading the Sacred Text from a Woman’s Perspective*, 65.

the woman who must therefore be financially supported for the duration of the divorce period. Darajah as found in sūra 2:228 (*darajatun*) is in fact used in the context of divorce.¹⁷²

Continuing on the line of linguistics, Asma Barlas raises two issues, perhaps the most debated and fiercely resisted but also embraced by women in the history of Egypt and Saudi Arabia: seclusion and veil. They are both considered requirements of the true believer, and perhaps the best-known issues that seem to define the Muslim woman as such, especially in Western thought. Veiling and seclusion are never explicitly mentioned in the Qur'ān. Specifically, veiling practices are not an exclusive trait of Islam or Muslim traditions. In other Mediterranean cultures, women used to veil. However, the veil, it can be argued, is a strong symbol of Islamic and Muslim belonging; an issue that has inhabited Orientalist visions of the Muslim woman but also nationalist discourses and anti-colonial battles.¹⁷³

Hijab, the veil, is firstly a linguistic issue; Asma Barlas, Wadud, but also Mernissi and Amin agree that although the veil (or a curtain, the meaning is still disputed) is prescribed in the Qur'ān (sūwar 33:33-35), it was only specifically meant to be worn by the Prophet's wives rather than all women.¹⁷⁴ Mona al

¹⁷² Leaman, Oliver (ed). *The Qur'an: an encyclopedia*, Oxon: Routledge, 2006, 167-169. The Qur'an only allows divorce to happen after a period of three months during which the husbands are responsible to support their wives, having a financial degree over them, being the breadwinners. There are other explanations that take this verse into account. The most important one has been offered by the various readings of Judge and Islamic Scholar Ibn Al-'Arabi. In his teachings on the harmony of the Universe, Al-'Arabi and through the readings of Murata, women are the qut'b of the pole of the universe, perfect human beings associated to Nature, to the Womb. Creation has been given by God to women. However, men have a degree over them because they are the breadwinners, earthly creatures that provide for their spouse and family.

¹⁷³ Eltahawi, Mona. "Why do they hate us? The real war on women is in the Middle East." *Foreign Policy*, 23 April 2012. [Online]. Available at < http://www.foreignpolicy.com/articles/2012/04/23/why_do_they_hate_us >. Last accessed 21 March 2015;

Aleryani, Hind. "Why don't men cover their faces?" *Your Middle East*, 29 April 2013, [Online]. Available at < http://www.yourmiddleeast.com/columns/article/why-dont-men-cover-their-faces_10547 >. Last accessed 21 March 2015.

¹⁷⁴ Barlas, Asma. *"Believing Women" in Islam: Unreading Patriarchal Interpretations of the Qur'an*, Austin: University of Texas Press, 2002;

Munajjed contends “[...] the object was not to restrict their liberty but to distinguish them from the other women and to protect them from harm and molestation.”¹⁷⁵ Fatima Mernissi offers a historiographical analysis of the term *hijab* and its linguistic root to point at how hijab was to be intended as a good practice of not intruding in private rooms if their ‘wall’ or ‘curtain’ was down, in a context—both cultural and historical—where privacy was a non-existing concept.¹⁷⁶

The veil also has been and has become a symbol of Islamic belonging, used in anti-Western rhetoric and nationalist causes; I will discuss in the next chapter how it has been embraced and rejected by feminists and women activists, Orientalist discourses, and anti-colonial rhetoric. It is a very complex issue, being simultaneously a node in the network of women’s issues, an issue that generates discussions and sparked debates and a network itself, where letters, images, pictures, and demonstrative acts make it emerge and take shape.

The veil also interlaces with what Mernissi calls false Ahadith. Mernissi has in fact undertaken a historical and methodological analysis of the alleged misogyny of some Ahadith, that responded more to specific political agendas than to the Prophet’s life, teachings, and deeds. One of such opportunistic practices emerges in the *hijab*, declassified—as Mernissi argues—to ‘veil’ and

Mernissi, Fatima. *Beyond the Veil. Male-Female Dynamics in Modern Muslim Society*. Bloomington, IN: Indiana University Press, 1987;

Qasim Amin, *The Liberation of the Woman and The New Woman. Two documents in the History of Egyptian Feminism*, Cairo, The American University in Cairo, 2000;

Wadud, Amina. *Qur’ān and Woman: Rereading the Sacred Text from a Woman’s Perspective*, Oxford: Oxford University Press, 1999.

¹⁷⁵ Al-Munajjed, Mona. *Women in Saudi Arabia speak: 24 Remarkable Women Tell Their Success Stories*, (Amman: Arab Institute for Research and Publishing, 2006), 57.

¹⁷⁶ Mernissi, Fatima. *The Veil and the Male Elite: A Feminist Interpretation of Women’s Rights in Islam*, 180-186. On these regards, Jacques Le Goffe highlights how the Middle Ages in Europe are not really famous for championing personal hygiene, personal privacy and care of the household. Le Goffe, Jacques. *Il Basso Medioevo*, Milano: Rizzoli, 1995.

become the symbol of Islam in many occasions. The woman torn between visibility and invisibility of the hijab emerges as a symbol, the emblem of religious identity and Islamic purity; the veil has unified, throughout history, a scattered and emotionally weakened Muslim Umma in anti-colonial struggles and also in times where sudden wealth could shake political unity or, as in the case of Egypt, served the purposes of finding identity after wars (1967) and Western financial encroachment and economic influence.

The issue of the veil emerges alongside that of seclusion, and it has been analysed in anthropological terms by Mounira Charrad and Nikki R. Keddie. Both scholars conclude that seclusion and veiling practices were developed in pre-Islamic times with the aim to preserve kin relations. At the heart of these two practices, as Charrad maintains, was the need to control women's sexuality, as a basis of political credibility, tribal alliances, and patrilineage.¹⁷⁷ The prophet Mohammad is in fact quoted as having said "when the woman comes towards you, it is Satan who is approaching you [...] after my disappearance, there will be no greater source of chaos and disorder from my nation than women [...]."¹⁷⁸

As a consequence, veiling, seclusion, and inferiority arise from the intermingling of linguistics, opportunistic ahadith, madhhab's preferences¹⁷⁹ of some suwar over others. However, the roles of proverbs and popular sayings cannot be left aside. Many Arab proverbs (popular in different North African and Middle Eastern contexts) portray women as "lacking" and "evil."¹⁸⁰ Some

¹⁷⁷ Charrad, Mounira. *States and women's rights: the making of post-colonial Tunisia, Algeria and Morocco*, Berkley, CA: University of California Press, 2001, 52-56.

¹⁷⁸ Charrad, Mounira *States and women's rights: the making of post-colonial Tunisia, Algeria and Morocco*, 57.

¹⁷⁹ Mahhdab is usually translated as "school of thought" and refers to a *mujtahid's* (a person that is qualified to exercise interpretation of Islamic sources) choice in regard to interpretive possibilities of the Qur'an and hadith on a particular question.

¹⁸⁰ Most of these proverbs and sayings have become rather alien to today's Arab societies. United Nations Development Programme. *The Arab Human Development Report 2005. Towards the Rise of Women in the Arab World*, New York: United Nations Publications, 2006, 148.

portray the woman as belonging to the house (domestic life) and child bearer; others justify girls' burial and use "moral and other arguments expressed in the language of tales and myths" to justify misogyny and the need to control women. However, if on one side women are considered inferior and only possess "half a mind, half a creed" and are "[...] worth half a man,"¹⁸¹ they are equally depicted as devilish creatures, masterminds of destruction. As already highlighted in Mernissi's reading of the woman in Islamic tales and myths, the woman has abominable intellectual and physical powers.

Thus, the woman is simultaneously a devilish creature that can bring chaos and a weak being that can only "reach a haven of security" through a man "since a woman cannot do without a man".¹⁸² These seemingly contradictory representations of the woman have been explained by Caroline Seymour-Jorn, in her readings of Etidal Osman, as "[...] voices of Bakhtinian sense of polyphony, a multiplicity of voices"¹⁸³ that emerge through "the many layers of [...] Arab heritage, [...] Qur'an, popular tales"¹⁸⁴ and local beliefs. However, other layers must be considered within this polyphony of voices Seymour-Jorn describes. In particular, the next section will analyse some specific ways in which feminists but also gender studies scholars have interpreted media – specifically digital media- in a Middle Eastern context. I will discuss the ways in which women are presented as having been able to challenge established discourses on identity through the uses of such technologies.¹⁸⁵

¹⁸¹ The Arab Human Development Report 2005. Towards the Rise of Women in the Arab World", 148.

¹⁸² A rather sinister proverb says "a girl belongs to her husband or to the grave". *The Arab Human Development Report*, 149-150. I recognise that these proverbs are not exclusive of the MENA areas; however, I am here reporting the positions and the explanations offered by sources, intellectual contributions and theoretical explanations with regards to Middle Eastern and North African countries.

¹⁸³ Seymour-Jorn, Caroline. "Etidal Osman: Egyptian women's writing and creativity." *Journal of Middle East Women's Studies*. Vol.2, No.1, Winter 2006, 95-121, 114.

¹⁸⁴ Seymour-Jorn, Caroline. "Etidal Osman: Egyptian women's writing and creativity", 116.

¹⁸⁵ I have consulted and studied articles, working papers as well as currently available literature on the 'effects' of blogging in many countries and the advantages of minorities to mastering technologies. However, I will consider these works due to their originality and contribution to the complexity of a discussion of technologies and Middle Eastern (and south East Asian) countries.

2.4 Media and women in the Middle East

Portrayal of the Muslim woman cannot avoid an investigation of representation as coming from theories of technology and media analyses. Technology has been a concern of 'third world' feminist theorists. As previously discussed, much of the literature taken into consideration showed the concern for the lack of access to technology granted to women in developing countries. When instead the delicate topic of women and digital media is approached, the available literature focuses on the ways the Internet and media in general have been used to escape oppression, reach (or try to) liberation and empowerment.

The array of analyses on the relationship between technology and women in the Middle East focuses on technologies of communication and comprises accounts of and reflections on the ways the latter are used to create bonds and advocacy networks, or how women challenge the societal status quo and identity discourses through the uses of such technologies. This section will address these discussions and investigate the ways in which colonial theories and discourses have influenced the selected literature, either presenting technology as a tool that responds to a "rescue narrative"¹⁸⁶ or a way for women to gain agency through their online activities.

In 1995 Swasti Miller discussed how "[...] computerized data-bases and e-mail(s)" were "increasingly being used in developing countries for effective communication among grassroots women's organizations" and how "desktop publishing" was already helping women produce literature and material to create networks of information and, potentially,

¹⁸⁶ Riley, Robin Lee. *Depicting The Veil: Transnational Sexism and the War of Terror*, London: Zed Books, 2013, 3.

advocacy.¹⁸⁷ As previously highlighted, technology has been seen as a hybrid space where gender practices could be put aside and women could be born anew, expressing themselves outside the framework of patriarchy and social normativity. To these regards, the works of Naomi Sakr, but also the review of *Karawan* by Fatima Mernissi and Deborah Wheeler's analysis of Internet Cafes in five Middle Eastern countries, deserve attention and discussion.

In her critique and analysis of accounts of women's empowerment "through self-expression," as Naomi Sakr's book title claims, Sakr highlights the faults of looking at the relevance of enquiries over women's managerial positions within communication technology businesses as a means to empowerment. As she in fact highlights "[...] there can be no automatic assumption that the female media practitioner is also politically engaged or a support of causes that are typically linked to women [...]."¹⁸⁸ Of additional relevance, Sakr highlights how a critical engagement into the analysis of self-expression and empowerment through the technologies of information and communication should also take into consideration the fact that agent and structure interact, meaning that technological artefacts and women that engage in technological activities are not one the effect or the product of the other but, following Haraway and Bruno Latour, they are enmeshed in each other.

Deborah Wheeler's case studies on Internet cafes in five MENA (Middle East and North Africa) countries is instead particularly interesting for an analysis of the spatial and navigational consequences of digital technologies and can prompt interesting reflections on the spatial consequences of code that have been—so far—underexplored. Her

¹⁸⁷ Mitter, Swasti and Rowbotham, Sheila. (eds). *Women encounter technology: Changing Patterns of Employment in the Third World*. [Online], <http://archive.unu.edu/unupress/unupbooks/uu37we/uu37we00.htm#Contents>>.

¹⁸⁸ Sakr Naomi. *Women and the Media in the Middle East. Power Through Self-Expression*. London: IB Tauris, 2004, 8.

attention is particularly focused on the way identity and social taboos are significantly altered by, for example, the possibility to freely talk about sex in chat rooms of Internet cafes or have a virtual affair and establish virtual friendships with people of the opposite sex. Internet cafes and digital spaces (in this case chat rooms) have therefore represented a very important 'place' through which identities are questioned and interests are shared, contravening restrictions and societal prescriptions.

Deborah Wheeler, but also the works of scholars like Gholam Khiabany or Babak Rahimi in the early days of the Internet and, during the 2009 turmoil in Iran¹⁸⁹ respectively, highlight the complexity that an analysis of digital media entails, an investigation that doesn't solely stop at the ways identities are altered, performances of gender change, and ideas of belonging shy away from kinship and group affiliation. Each of these case studies could offer a fascinating example of the ways code, software, algorithm, routers, and the complex set of technicalities that underlay the Internet revolution enmesh with the personal sphere and become political agents.

Fatima Mernissi used the term *cosmo-civics* to describe young people that have embraced technology to learn and communicate with the outside world.¹⁹⁰ However, such optimism doesn't escape her view of technology as a new form of colonisation from the West, and a critique of the lethargic

¹⁸⁹ Wheeler, Deborah L. "Blessings and Curses: Women and the Internet Revolution in the Arab World" in ed. Sakr Naomi *Women and Media in the Middle East: Power through Self Expression*, London: IB Tauris, 2007, 138-161;

Rahimi, Babak. "Facebook Iran. The Carnavalesque Politics of Online Social Networking," in *Sociologica*, Vol.5, No.3 2012, np;

Sreberny Annabelle and Khiabany, Golham. *Blogistan: The Internet and Politics in Iran*, London: IB Tauris, 2010;

Roberts Joseph W., *How the Internet is changing the practice of politics in the Middle East. Political Protest, New Social Movements and Electronic Samizdat*, Lewinston: NY, 2009.

¹⁹⁰ Mernissi, Fatima, *Karawan. Dal Deserto al Web*, Firenze: Giunti Editore, 2004, 17-19 and 176-227.

attitude of the Muslim world toward time. In a very melancholic tone she maintains that the difference between the West and the Islamic world is “not so much about attitude toward change as about attitude toward time, anguish about time’s arrow draining us as it points toward death”;¹⁹¹ such lethargy toward time has turned Muslims into users of technologies that Westerners compete to develop, improve, distribute, and profit from. As a consequence, it could be argued that although Mernissi recognises the great input of digital technologies on the formation of techno-civics, the melancholy doesn’t spare them; they are masters of ‘tools’ coming from Western dominance, a new form of colonisation led by technological devices and technological ‘addiction’ to social networks.

Albrecht Hofheinz noted that media tend to generate hopes and optimism in academics and activists every time they emerge and are embraced by Middle Eastern publics.¹⁹² The example that is perhaps most popular is the warmth with which Middle Eastern activists welcomed the protests of veiled women during the 1979 Iranian revolution, made with audiotapes illegally distributed in the country, mosques’ sermons, and fax machines.¹⁹³

At the verge of the 1979 Revolution, feminist activist Nawal El Saadawi accused imperialist powers of spreading false information about

¹⁹¹ Mernissi, Fatima, *The Veil and the Male Elite: A Feminist Interpretation of Women’s Rights in Islam*, 19.

¹⁹² Fatima Mernissi. *Karawan, Dal Deserto al Web*, Firenze: Giuti Editore, 2004;

Sreberny, Annabelle and Khiabany, Gohlam. *Blogistan: The Internet and Politics in Iran*, London: IBTauris, 2011;

Hofheinz, Albrecht. "The Arab Spring. Nextopia? Beyond Revolution 2.0." *International Journal of Communication*, Vol.5, Issue 18, 2001, 1417-1434.

¹⁹³ Sreberny-Mohammadi, Isabelle and Mohammadi, Ali. *Small Media, Big Revolutions: Communication, culture and the Iranian Revolution*, Minneapolis, MN: Minneapolis University Press, 1979.

the fanatic and extremist intents of Ayatollah Khomeini.¹⁹⁴ In her view the revolution was “a popular explosion” that sought to “emancipate the people of Iran [...] and not send women back to the prison of the veil, the kitchen and the bedroom.” El Saadawi continued by claiming how the revolution had finally “lifted the [...] banners of freedom from imperialist oppression”. The same enthusiasm was sparked during the Green Revolution on the occasion of the Iranian elections in 2009 and, the “Arab Spring” in 2010 and 2011. However, nextopia cannot solely be curtailed to revolutions and turmoil but also in the usage and embracing of digital media. In particular, the use and political potentials of blogospheres, social networking sites that have been seen as bringing change, challenging governments, and bringing dictators to their knees.

Digital media have created a new layer where women’s issues can be found, are formed, discussed, and take shape. Rather than assuming their political potential and their contribution to the democratisation of countries, the perspective of the influence of digital media on the ways identities are displayed, discussions are formed, and issues emerge is privileged in this thesis. When in a discussion of women’s issues in Egypt and Saudi Arabia in relation to digital media, several elements are to be taken into consideration. Firstly, Egyptian women—as the next chapter will explain—have always greatly contributed to the making of their country, its identity, and its struggles. Saudi Arabia is a country that, contrary to Egypt, has very little history of struggles; as a consequence (and for many other reasons that will be discussed later on) it is very difficult to attest how digital technologies contribute to a revolution. Secondly, an analysis of women’s issues in these two countries can only take into consideration the

¹⁹⁴ In El Saadawi’s words “any ambiguity in Islamic teachings, any mistakes by an Islamic leader any misinterpretation of Islamic principles [...] can be inspired by CIA provocations [...]. Only a short while ago, the Western press orchestrated a campaign against the Iranian revolution accusing it of being reactionary, of imposing on women the veil and the chador, of attempting to deprive them of the civil rights they had enjoyed under the rule of the Shah.” El Saadawi, Nawal. *The Hidden Face of Eve. Women in the Arab World*, London: ZED Books, 1980, xiii.

ways in which the concept of the issue takes shape and forms nodes, links, and—as a consequence—networks. It is a riskier activity because, as I will show in the final chapters, certain issues will gain centrality that are perhaps not reflective of feminists' theories and international organisations' reports; however, they represent the best way of understanding how certain issues emerge through technowomen at the technological layer. Without presumptions of showing what women's issues are in Egypt and Saudi Arabia, an analysis of emergence of the issues through and with technology is a more useful activity, one that can show what is considered of relevance, worthy of discussion and attention, and how the concept of women's issues in these two countries is further enriched by the technological layer.

2.5 Conclusion

This chapter has presented the concept of representation of the Muslim woman as discussed in feminist theories, colonial literature, and related reviews. Representation constitutes an important layer in the multi-layered and networked map of women's issues, because it helps evaluate the terrain of an analysis into the emergence of a number of women's issues in a broader Muslim context. The issues that have emerged within this particular layer have been those related to the complexity of the veil, guardianship, and the social fabric that is made of—among others—proverbs, traditional beliefs, and tribal legacy.

Through this chapter I have highlighted the importance of following the emergence of issues through discussions, aggregations, and the complex assemblages that contribute to such an emergence. This layer has discussed the opposition of a Muslim woman as real with a represented one, the multiplicity of issues such as the veil (*hijab*), guardianship (*qawama*), and

the contradictory idea of a woman as simultaneously inferior and conniving a creature that needs control and seclusion in order for her powers to be contained. The next chapter will continue mapping the multiplicity of the issues that emerge, once the countries' locales are considered.

Chapter 3: Women's movements, nationalisms and emerging issues

3.1 Introduction

The previous chapter outlined the main discussions coming from third world feminists, Muslim and Islamic scholars, and feminists with regard to the issue of representation of the Muslim woman. The controversial relation between women in a Middle Eastern context and media has been also explored. These aspects, I argue, contribute to the making of an important layer of a multi-layered and networked map of women's issues in the localities of Egypt and Saudi Arabia, or that of representation.

In this chapter I will continue mapping women's issues, following the traces left by nationalist rhetoric, women's press, articles, and letters that participate in the making of women's issues in Egypt and Saudi Arabia. Specifically, I will look at the relationship established between women's movements, colonisation, and nationalism at the turn of the 20th century and its many negotiations and transformations.

This particular layer will appear to be a linear path of historical accounts of women's issues, fights, and struggles in relation to nation-state formation, colonialism, and post-colonial struggles. However, the effort will be one of ensuring that the entanglement of discussions, articles, speeches, but also activities, emerging issues, and politico-economic situations take priority.

The work I will be doing will be different for Egypt and Saudi Arabia, given their different history. Egypt offers a vast and rich set of relations between stories and histories of women's issues. Saudi Arabia, on the contrary, is unique because women's issues are entangled with and emerge from the co-action of architecture and space constrictions, Wahhabi

rhetoric, *fatwas* toward an Islamic purity, and new oil-related wealth. As previously stated, the analysis that I will propose is rich in contradictory elements. The issues are multiple and so are their lives. Such multiplicity, I argue, seems to suggest confusion over the aims and goals of women and their attempts to address their issues. Issues like the veil will continue to be discussed as emerging in their intrinsic complexity; the veil—it will be shown—has been simultaneously embraced and rejected in Egypt, and fought with sarcasm by women in Saudi Arabia. The issue of the driving ban seems to be agreed and disagreed upon, but emerges as central in Saudi Arabia. I argue that such confusion and contradictory attitudes reveal the complexity of the issue at stake. I will in particular discuss how veiled women marched for an Egyptian state, how the veil was rejected by women's activists soon after such marches, and how segregation, already emerged as an issue in the previous chapter, becomes an architectural choice—or constraint—in the making of the Saudi space.

The first part of the chapter will analyse Egypt. This choice wants to be a continuation of the previous chapter, where the layer of representation has been investigated. Egypt in fact experienced direct colonisation; the movements, activities, and debates against the British and French occupations centred on the position of women, their participation in the labour force and their roles as citizens.

I will then continue the analysis, focusing on Saudi Arabia. The Saudi kingdom has never been colonised and its birth can be dated back to 1933. Although free from colonial and anti-colonial rhetoric, women's issues in the country sit between the Wahhabis' extremist visions of life and the world, oil wealth, *fatwas*, and reforms, all of which are reflected in the ways space is experienced and constructed. Egypt was the prime crucible of the process of transformation and struggles around the meaning of gender in the MENA region since the 19th century. Saudi Arabia is a controversial terrain, where politics intertwines with religious ideology and economic

prosperity, Western investments, and anti-Western policies. It would not be too dangerous to affirm that at the centre of any discussions that concern these countries lie women's issues, the rhetoric around the position of women, and their struggles that emerge in different layers and across different lines.

It will be this chapter's goal to highlight the main issues that these contradicting traces leave, merging nationalism, nation building, and women's roles and positions.

3.2 Egypt, colonisation, and women

Egypt heralded developments in the North African and Middle Eastern region and can be considered the forerunner of reforms particularly in matters of nationalism and feminism.¹⁹⁵ The transformation of the country had a slow start after Muhammad Ali took power starting a dynasty that ruled until the 1952 Revolution. This period of history offers an idea of the crossed paths of secularisation, Islamisation, and 'genderisation' of colonial verses anti-colonial struggle.

Egypt was invaded Egypt in 1798 by Napoleon troops; this contact had a strong impact on European cultural expressions of the East.¹⁹⁶ However, the French invasion triggered an unprecedented move toward

¹⁹⁵ Kumari, Jayawardena. *Feminism and Nationalism in the third world*, London: Zed Books, 1986.

¹⁹⁶ Keddie, Nikki R. *Women in the Middle East, past and present*, Princeton, NJ: Princeton University Press, 60. It must be however acknowledged that the "orientalist" influence of the Persian Empire populated western literature since the early 13th century; the most important character is Shakespeare's Othello, a Moor and Dante Alighieri mentioned Mohammad and Ali in the Inferno (VIII Book). According to modern interpretations Dante wanted to punish Mohammad and Ali for having divided people and instigated hate and wars. Santarone, Donatello. "Intercultura e Letterature. Letture del romanzo *Cittadina di Seconda Classe* di Buchi Emecheta (Nigeria)." Susi, Francesco (ed). *Come si e' stretto il mondo. L'educazione interculturale in Italia e in Europa: teorie, esperienze e strumenti*, Roma: Armando Editore, 2008, 265-284.

modernisation and industrialisation in the country, which instilled enthusiasm but also resistance and refusal. Economic and technical developments altered and reshuffled well-established social and cultural orders, reorganising and changing the balances of classes, wealth, power, and hegemony. Mohammad Ali showed fascination with French technological development and military superiority and gave way to a long work of modernisation of the army, supported by industrial development and the establishment of medical and technical schools.

Ali's fascination and his decision to adopt strong economic and political measures in the country initiated a slow and controversial march toward industrialisation causing a wave of internal migration (from rural areas to new urban centres) that primarily affected women's positions.¹⁹⁷ At the same time, Muhammad Ali's decision to open technical and medical schools offered an opportunity to urban and upper-class women to receive an education, giving way to the establishment of charitable girls' schools and academies.¹⁹⁸

Modernisation brought about questions and debates with regard to women and their participation as a labour force. If on one side the Qur'an and its Message were used to support women's participation in the making of a fast-evolving society, on the other side restrictive *mores* and remembrances of a golden age of Islam became a symbol of resistance to

¹⁹⁷ Leilah Ahmed and Nikki R. Keddie argue that Muhammad Ali's decisions regarded the nationalization of trade (mainly cotton) and radical reforms on land's ownership that affected women's independence. The Qur'an in fact, recognises the woman the right to trade and manage her own property in suwar 4:1-14; Ali's governmental and western-influenced policies encouraged and increased male-controlled trade and declared that registration of trades and properties was agreed only to men, despite the good number of women that owned a property and ran their own trade. Keddie, Nikki R. *Women In the Middle East: past and present*, 36.

¹⁹⁸ Ali Muhammad opened the first medical school for girls around 1827 and in 1835 the first school for translators. If the government acted slowly in the field of public education (and it virtually stopped after 1882), charities of Egyptian women and religious missions (mainly catholic) offered free education for boys and girls. It is estimated that in 1897 government provided for 11,000 students and the benevolent organization 181,000; government schools accounted for 863 females whereas charitable organization accounted for 1,164. Leila Ahmed, *Women and Gender in Islam. Historical Roots of a Modern Debate*, New Haven, CT: Yale University Press, 62-167.

the outsiders. Islamic extremisms collided with calls for modernisation through the Qur'an. These modernist calls came especially from the *Al-Nahda (Awakening)* movement that exhorted women's awakening (*al-nahda al-nisa'iyya*) as the only way toward Egyptian freedom.¹⁹⁹

Contradictions and oppositional forces already emerge here. Letters and documents dated between the end of the 18th century and the end of the 19th century portray the oppositional, almost dichotomous, reflections on the positions, status, and roles of the 'Egyptian woman' that slowly—almost unnoticeably—becomes the 'Egyptian Muslim woman'. Jayawardena Kumari reports that Napoleon is said to have written a letter in 1798, following the assassination of general Dupuy, addressing the Muslims of Egypt as brothers, and the French troops as "Muslims." The letter is believed to be a justification of the colonisation of the country, following the invasion to restore the Supreme Porte. In its English translation, it can be read: "Peoples of Egypt, you will be told that I have come to destroy your religion; do not believe it! Answer that I have come to restore your rights and punish the usurpers, and that, more than the Mamluks, I respect God, his prophet and the Koran."²⁰⁰

The answer to Napoleon's letter came by historian Abd al-Rahman al-Jabarti who highlighted how French rulers "[...] follow[ed] this rule: great and small, high and low, male and female are all equal. Sometimes they break this rule according to their whims and inclinations or reasoning.

¹⁹⁹ Qasim Amin, *The Liberation of the Woman and The New Woman. Two documents in the History of Egyptian Feminism*, Cairo: The American University in Cairo, 2000

²⁰⁰ Kumari, Jayawardena. *Feminism and nationalism in the Third World in the 19th and early 20th centuries*. The Hague: Institute of Social Science, 1982; the letter from Napoleon Bonaparte to the People of Egypt, dated 2 July 1798 is available at <http://www.usna.edu/Users/history/tucker/hh362/Napoleon%20invades%20Egypt.htm>. Last Accessed 21 March 2015. Although it is not the goal of this research, the history and the role of women in Mamluks communities should deserve higher attention, given their statuses of *wafqa* or able to manage their own properties and their interests. Very little is available in the literature although, it could be argued, the organization of Mamluks are slave-warriors and Mamluks women's positions could be seen as having played an important role in the formation of Egypt, although almost neutralized (and ridiculed) by Napoleon.

Their women do not veil themselves and have no modesty. Whenever a Frenchman has to perform an act of nature, he does so wherever he happens to be, even in full view of people [...].”²⁰¹ French and—later—British occupation used the rhetoric of women’s empowerment to justify and even encourage a Westernised life style. One of the issues that emerge at this stage is education. British and French protectorates proposed initiatives to open schools for girls that benefited women from the upper classes. Education also emerges in its centrality in the debates between conservative Islamic exponents, as Al-Jabarti’s response would suggest, and modernists such as Qasim Amin or Ria’a Rafi’ el-Tahtawi. In fact, verbal attacks on Napoleon (and British rulers later) and the calls for women’s modesty and seclusion clashed with Amin’s calls for women’s education, unveiling, and freedom to leave their homes. In such altercations and rhetoric women’s education became central, a controversial topic that divided the overall societal fabric.

This issue was in itself multiple; education was championed by the French and British rulers to justify their presence in the local reality of Egyptian politics; at the same time, it was considered (by scholars and activists) the only way Egyptians could free themselves from colonisers.

These oppositions and contradictory positions overlooked an important and silent revolution that this issue was contributing to, the opening of charitable schools and the birth of a women-only press. Although charitable in status, these schools saw the active engagement of upper-class women that championed public education, health, and hygiene for women and infants; they gradually included topics on the accessibility to employment for women and equal rights between men and women at all

²⁰¹ Letter from Napoleon Bonaparte to the People of Egypt, dated 2 July 1798. Available at <http://www.usna.edu/Users/history/tucker/hh362/Napoleon%20invades%20Egypt.htm>.

levels.²⁰² These charitable schools and the issue of women's education didn't stop at the idea of literacy for women. Education became an all-encompassing issue, intrinsically political and expanded to include discussions and petitions for women's employment, personal hygiene, and also women's role in the making of the Egyptian nation-state. Education was also pushed through the nascent women's press that, as Margot Badran highlights, grew due to the oral tradition, as explained below.²⁰³

The first women-only magazine was *al-Fatat*, published by Hind Nawfal from 1892 to 1893. The first issue was published and distributed on the 20th November 1892 in Alexandria.²⁰⁴ The magazine embarked in various discussions and is considered the first magazine entirely dedicated to 'women's issues.' One of these 'issues', later addressed in the women's press of the time, was the campaign called 'scientific domesticity', or discussions aiming at educating women on hygiene, house-keeping, and disease management, which soon became central throughout the Middle East. Despite the little or absent attention to this campaign in available literature, scientific domesticity featured one of the major changes in women's lives, opening the doors to women's privacy; it gradually covered and consistently petitioned for monogamy and the singular nuclear family.²⁰⁵ Education and the role of women in the making of the Egyptian

²⁰² Among these, there was the request to gradually introduce the right to vote for women; contemporarily to Clara Zetkin's social-democratic women's movement in Germany and prior to Emily Pankhurst's Social and political Union in England, founded in 1898.

²⁰³ Badran Margot and Cooke, Miriam (eds). *Opening the Gates. A Century of Arab Feminist Writing*. Bloomington, IN: Indiana University Press, 1990.

²⁰⁴ Al-Fatat has been republished by WMF (Women memory and Forum) in 2006. It is possible to access and read very interesting discussions about women's positions and very simple articles about tips to rear children or breast-feed can be easily studied and interpreted as a big political issue of concern. Especially if looking at the intense period of parallel Islamisation and secularisation the country was undergoing.

²⁰⁵ Al-Fatat played a major role in promoting the participation of women in the field of journalism in particular, and in public life in general; it embarked on discussing women's issues openly. It was published at first between 1892 and 1893 and then, a second edition started in 1898. In this period there were 30 to 40 women's magazines, printed not only in Egypt (mainly Alexandria) but also in the main centres of immigration (Sao Paulo and New York).

Nation state re-emerge in relation to Nasserite attempts at modernisation. Equally relevant, is the emergence of the issue online.

3.3 Anti-colonialism, modernity, post-colonialism: veiling and Islamic Jurisprudence

Press, women's education, and modernisation at the height of colonisation go hand in hand with another important historical factor, or the imposed secularisation of the legal system. With the exception of the Personal Status Law, which remained under the supervision of Islamic Jurisprudence, the legal system was secularised following the French model.²⁰⁶ Lama Abuh Odeh maintains that Egyptian elites saw in the legal system's secularisation a necessary move toward modernisation, while choosing to avoid direct clashes on the Personal Status Law, based on the Taqlid law and its doctrinal arrangements.²⁰⁷ In the scholar's view then, "the Islamicity of the rules on the family came to symbolize the last bastion of a dismantled Islamic legal system, the reform of which threatened to flood Egypt with the European and the secular." This created a situation of "[...] attachment to medieval patriarchy" that "came to mean attachment to the Islamic [*patriarchy*]."²⁰⁸

The Egyptian Personal Status Law has undergone many alterations, always minimal, and has become a crucial political issue for whomever takes control of Egypt. The secularisation of most of the legal system in Egypt had already happened during Napoleon's rule; the Shari'a courts

²⁰⁶ Anderson, J. N. D. "Law Reform in Egypt: 1850-1950", Holt P.M. (ed). *Political and Social Change in Modern Egypt*. London: School of Oriental and African Studies, 1968. 217-224.

²⁰⁷ Abu-Odeh, Lama. "Modernizing Family Status Law: the case of Egypt". *Vanderbilt Journal of Transnational Law*, Vol. 37, 2004, 1043-1146.

²⁰⁸ Badran, Margot. "Competing Agenda: Feminists, Islam and the State in Nineteenth- and Twentieth-Century Egypt," Kandiyoti, Deniz (ed). *Women Islam and State*, London: Macmillan Academic and Professional, 1991.

were set at the levels of Coptic courts, a sectarian ruling system for 'minor' issues like family, charity, and religious disputes.²⁰⁹ The amendments to the Personal Status Law and the various articles introduced in support of family law between 1910 and 1929 are important to the investigation of women's issues in Egypt. The first Personal Status Law received the status of a legally relevant corpus of Law in 1925, and underwent several updates and amendments, the most significant of which were under the secularised regimes of Nasser, Sadat, and Mubarak.

One amendment worth analysing is the introduction of Law 25 in 1920 and its revised version approved in 1929 (reiterated in 2000 by Law 1, art.6) that allowed married women to unilaterally divorce in case of unhappiness. Badouin Dupret rightly highlights how such an article is still used in Egyptian courts in the many cases of familial disputes.²¹⁰ This practice would *de facto* challenge the Qur'ān and suwar 2:228-230, which recognise the husband as having the sole entitlement to divorce. It wasn't possible to find any feminist sources or literature with regard to Law 25, 1920 and 1929, or scientific domesticity; as a consequence it is not possible to understand if the law has received any focus and how it has been applied and what sort of discussions have arisen around it. However, the presence of this provision and, likewise, the lack of interest and discussions it receives shed light on the rhetoric of women's activists in the period between 1919 and 1922, rhetoric that seems to clash with the post-1952 Revolution and, most importantly, with the rhetoric of the piety movement

²⁰⁹ Anderson, J. N. D. "Law Reform in Egypt: 1850-1950", in Holt P.M. (ed). *Political and Social Change in Modern Egypt*. London: School of Oriental and African Studies, 1968. 217-224.

²¹⁰ The article 6 of Law 1920 and Law 25 (both amended by Law 100, 1985 and Law 1, 2000) states:

"If the wife alleges that the husband mistreated her in such a way as to make it impossible between people of their social standing to continue the marriage relationship, she may request that the judge separate them, whereupon the judge shall grant her an irrevocable divorce if the harm is established and conciliation seems impossible between them [...]"Dupret, Baudouin. "What is Islamic Law? A Praxiological Answer and an Egyptian Case Study." *Theory, Culture & Society* Vol. 24 No. 2, March 2007, 79-100, 97.

Mahmood traces, and the wave of Islamic revival of the 1970s, following Nasser's defeat by Israel.²¹¹

This lack, I argue, doesn't leave voids but enforces the idea of ramifications and alliances that emerge when the choice is one of mapping issues rather than following the linearity of women's movements and activities. Along with the forgotten campaign of scientific domesticity, the absence of this particular law in feminist writings and accounts of struggles highlights how heterogeneous actants—in the complex network of women's issues—appear and, seemingly, disappear, retain no connections with other actants on the network or fail to acquire centrality. Such disappearance or lack of centrality doesn't make them less relevant. Rather, on the contrary, this element highlights these actants' indirect relevance in the making of the multi-layered network of women's issues and the ramifications that can also end in blind spots, like in this case of the multi-layered map.

This element is further corroborated by the accounts of women's involvement and movements at the turn of the 20th century; the battles and silent revolutions initiated by missionary schools, women's press, and campaigns on scientific domesticity disappeared, instead leaving space to Islamic principles and laws that became increasingly intertwined with women's rhetoric of empowerment and resistance. In fact it could be highlighted that by the turn of the 20th century, women's activities and activism intensified, embracing what Badran has defined as "social feminism".²¹² This term would be best explained as the enmeshment of women's activism and marches to empowerment with nation-building and

²¹¹ In 1922 the British Government, under pressure, issued the declaration of Egyptian independence, although it reserved several important powers.

²¹² Badran, Margot. "Egyptian Feminism in a nationalist century". *Al-Ahram Weekly*. No 462, December 1999-Jan 5, 2000. Available at <http://weekly.ahram.org.eg/1999/462/women.htm>. Last accessed 22 June 2010;

Further information about mapping feminist struggles in Egypt, Margot Badran, *Feminists, Islam, and Nation: Gender and the Making of Modern Egypt*, (Princeton, NJ: Princeton University Press, 1996).

anti-colonial struggles. These three elements merged and emerged during the occasion of the 1919 revolution. As it can be read in accounts of the time, “British and Egyptians alike were surprised to see veiled women marching for a free Egypt.”²¹³ Veiled women marched alongside men against British occupation despite the fact that the veil was not a piece of ornament in use at the time.

As a consequence the veil came to be associated with the revolution, to the nationalist and anti-colonial struggle, and—most importantly—to the Islamic identity of a free Egypt. Huda Sha’arawi, the fervent feminist, who always opposed practices of veiling and seclusion, led marches of veiled women “in support of the national cause” and Islamic tradition came to unify the Egyptians against the oppressor.²¹⁴ The political consequences of a veiled Shaarawi are noteworthy: nationalism started to be associated with traditional and religious identity; Islamic modesty and anti-colonialism came to the foreground with the same veiling practices modernists at the dawn of the 20th century had fiercely opposed, as discussed in the previous chapter. In 1922 the *Al-Ittihad al-Nisa’i al-Misri* (Egyptian Feminist Union, or EFU) was constituted.

In 1923 the Egyptian Constitution was signed, recognizing the equality between human beings in its Article 1. That very same year, the newborn EFU participated to the International Women’s Suffrage Alliance in Rome, and Huda Sha’rawi and Nabaya Musa expressed their resentment against the West. In their speech during the International Conference, they referred to the Pharaonic and Islamic eras as golden ages where women were guaranteed rights and respect, and praised the virtues of peasant women around the globe. In 1924 the newly formed government did not

²¹³ Zian, Fahmy. *Ordinary Egyptians: Creating the Modern Nation through Popular Culture*. Stanford, CA: Stanford University Press, 2011, 138–39.

²¹⁴ Sullivan, Earl L. *Women in Egyptian Public life*, Syracuse, NY: Syracuse University press, 1986, 171. The first women’s demonstration was held on Sunday, 16 March 1919, and was followed by yet another one on Thursday, 20 March 1919. Sullivan, Earl L. *Women in Egyptian Public life*, Appendix.

keep the promises of the women's vote. As a consequence, women activists appealed to the Qur'ān and the Constitution to highlight the egalitarian principles of both, religious and positive laws.

As these events show, this layer is rich in contradictory responses to the central topic of the veil that emerges as a central issue. As it has been already discussed, this research to date hasn't found any information in reference to women's responses to the Law 25 of 1920 and 1929. Speech and diaries, articles, and essays written during the period 1919–1929 and the following decade show what could be deemed as a contradicting rhetoric that brings to life a 'double standard' with regard to what could be considered women's empowerment and the path to follow to reach liberation.

The 1919 revolution saw the veil as the emblem of the anti-colonial struggle; this struggle also represented a march to a nation-state idea and to a national identity. But the idea of a free Egypt also carried with it and was built upon strong Islamic principles. The Rome conference in 1923 revealed a very passionate Egyptian Women's movement that advocated these very Islamic principles as key to women's liberation and nation building. This enthusiasm materialises through speeches but also through the press, and the strong support of women in the making of the 1919 revolution and a post-colonial Egypt.²¹⁵ These elements show how the concept of women's issues multiply and become, simultaneously, entangled with nationalism, national identity, activism, and quests for women's rights.

If from one hand key figures of the 1919 revolution like Shaarawi marched veiled and spoke of Islamic golden ages, pictures of the time show

²¹⁵ This act of dissent was followed by a petition to the government presented in 1927. In it the prominent feminist challenged the government with regards to the discrepancies between the 1923 Constitution and the 1924 electoral law that outcast women's vote.

the same Shaarawi throwing her veil off after the Rome conference.²¹⁶ This contradiction shows the complexity of this layer. The most impactful issue that can be used to portray such complexity is the veil. It was used as a symbol for anti-colonial struggle, a garment in International arenas where Islamic rhetoric was exalted, and was seen as a constraint; what emerges is that the issue per se becomes central, the discourses and the acts that emerge deserve attention, because it highlights aspects of women's issues' discourses that a linear analysis of historical contingencies of feminist theories cannot offer.

3.4 Secularised Egypt and new contradictions

The complexity of this layer expands and grows when the rhetoric of feminists and their internationalist calls are taken into consideration. At the dawn of World War II, in fact, women's rhetoric seemed to show an internationalist agenda that was further stressed through the EFU participation to the first Congress of Arab Women in 1938 and the Copenhagen conference in 1939. In both cases, the Egyptian delegation seemed to have abandoned the Islamic tones and embraced a nascent socialism, pioneering the Nasser's Pan-Arab utopia of the 1950s. During the 1938 First Congress of Arab Women in Cairo, Egyptian women showed concern for issues related to Palestine.²¹⁷ In the 1939 International Women's Conference in Denmark, the Egyptian delegation stressed its populist overtones with the submission of an eight-point programme calling

²¹⁶ Some accounts recall that Shaarawi threw her veil off once approached by train in Cairo, some others instead report that Sharaawi threw her veil off from a boat while approaching the port of Alexandria. It is important to notice that the decision to remove so publicly the veil was connected to Sharaawi's affinity with French born feminist Eugenie Le Brune, Egyptian feminist and intellectual whose work –consisting of books and *epistulae*, is still to be fully appreciated and translated in English.

²¹⁷ Badran, Margot. "Egyptian Feminism in a Nationalist Century." *Al-Ahram Weekly* Issue No 462, December 30, 1999- Jan 5, 2000. [Online] Available at <<http://weekly.ahram.org.eg/1999/462/women.htm>>. Last accessed 22 June 2010.

for international cooperation, internationalisation of trade, human rights, and redistribution of wealth. It also called for governments to be in control of the production of weapons.²¹⁸

Although these actions and words seemed to hint at the secularisation of the country and open the doors to the 1952 Revolution, the aftermath of Nasser and Sadat's *coupe d'état* reveal new contradictions, new distinctions, and new fights that cannot be dismissed in the analysis of women's issues. Stowasser talks about a "post-colonial crisis" that was accentuated by the wave of secularisation mixed with Islamic rhetoric that characterised—to various degrees—Nasser and Sadat's regime. Rights for women were expanded under Nasser who recognised women's right to vote, abolished religious courts, and imposed criminal and civil courts only, mainly based on French legal frameworks. However, during the Nasserite regime secularisation and Islamism became intertwined, starting a rather ill-lived era of modernisation, the pan-Arab project, secularisation, and opportunistic use of Islam.

Education became once again an important issue, becoming obligatory for women and men alike. Nasserian politics focused in fact on stressing the pan-Arab project of a secular Middle East, initiating what Anwar addressed the "Arab cold war" fought mainly between Egypt and Saudi Arabia. Pan Arabism met and merges with national secularism, where "different sets of identities were somehow selectively emphasised."²¹⁹ Such selection proved harmful to "the categories of citizens" like Christians and women who were made vulnerable by these contradictions. The denial of full citizenship to women through the almost unaltered Personal Status Law and the strong imprint of Islamic rhetoric that Nasser used to affirm his power allowed him "to safeguard (the regime's) dual identity between

²¹⁸ Badran, Margot. "Egyptian Feminism in a nationalist century."

²¹⁹ Shrukrallah, Hala. "The Impact of the Islamic Movement in Egypt." *Feminist Review*, No. 47 Summer 1994, 15-32, 20.

traditional and modern” and “continue to use Islam [...] as a legitimising basis [...], a component in its national identity.”²²⁰ Anwar further stresses how Islamic principles were not central to Nasserite politics; however, Islam “emerged as “a” component in the state’s ideology.”²²¹

This is especially proved by the mixed responses to the requests to significantly change the Personal Status Law and, most importantly, by the important input of the Nasserite regime to put all mosques under State control.²²² The major changes to the Personal Status Law were only made in the Sadat era; the majority came in 1976, with a law that allowed women to access alimony through the Nasser Social Fund (through the Nasser Social Bank established in 1971, after Nasser’s death).²²³

The defeat against Israel in 1967 posed an end to Nasser’s Pan-Arabism. It was not until 1976 that the Personal Status Law was hit strongly with the establishment of the previously introduced “Nasser Fund” for divorced women to whom alimony wasn’t granted. The changes started to then take place again in the 1980s with another financial rule for divorced women and especially the 1990s and 2000s. In 2005, women were granted custody of their children in case of divorce until the age of 15, an age after

²²⁰ Shrukrallah, Hala. “The Impact of the Islamic Movement in Egypt”. 21.

²²¹ Anwar, Alam. *Religion and State. Egypt, Iran and Saudi Arabia (a comparative study)*, Delhi: Gyan Sagar Publications, 1998. 55.

²²² Nasser understood the important role of the Ulama. In order to face the “Arab Cold War” mainly against Saudi Arabia, Nasser put all mosques under the control of the Ministry of Awqaf, even the private ones and the ones in the hands of the Muslim Brotherhood. At the same time, the regime recognized the importance of contributing to the spread of Islam. Between 1952 and 1964 78 new mosques were built. The regime also contributed \$E 1,235,000 circa to contribute to the building of 1,500 private mosques and “employed numerous Imams [...] to spread the messianic gospel to Nasserism throughout Egypt”. In Anwar, Alam. *Religion and State. Egypt, Iran and Saudi Arabia (a comparative study)*, 87.

²²³ Promotion of Women’s Rights. “Personal Status Law in Egypt.” Book realized with the financial support of the German Federal Ministry for Economic Cooperation and Development, and with technical support by the German Technical Cooperation. [Online]. Available at: <<http://www2.gtz.de/dokumente/bib-2010/gtz2010-0139en-faq-personal-status-law-egypt.pdf>. > Last retrieves 21 March 2015. According to the authors, the 1976 Law was never really implemented due to the impossibility of the Bank to deal with the number of the requests.

which the child is considered an adult and can choose which parent to live with.²²⁴

Despite these major attempts to modernise the Personal Status Law, the changes occurred only under Nasser and Sadat, whose regimes imposed both modernisation and Westernisation; most importantly, both leaders silenced any opposition, from the Marxist left that supported Pan-Arab socialism, or the Muslim Brotherhood that hoped for a 'pure' Islamic state. The second Egyptian Revolution (1952) in fact imposed secularisation, used socialist overtones, and later embraced Islamic principles to realise what Nawaal El Saadawi deemed a hypocritical change that gave way to new forms of colonialism and opposed any form of dissent, either political or religious. The debt accumulated to become players in the International sphere and the ambitious projects of Nasser to defeat Israel and be a US ally at the same time brought secular women such as Nawal Al Sadaawi, in alliance with women and men who found refuge in Islam and in the radicalisation of its religious teachings.²²⁵

The defeat against Israel brought about an Islamic revival that characterised the whole Middle East and invaded Egypt as both a political move from Sadat but also, pervaded all strata of society. The Islamic revival seemed to emerge as both, a political move from above, with Sadat's decision to obtain Saudi's support,²²⁶ and, most importantly, it came from 'below'. Islamic modesty and strict adherence to traditional codes of

²²⁴ This law is also called the "Suzanne Mubarak" Law. It has been challenged since the 2011 revolution as an outcome of the regime's subordination to Western interests. I will talk about the backlash later on in the chapter.

²²⁵ The Encyclopedia of Islam and Muslim world highlights that: "Since the 1970s, as a result of Iran's Islamic Revolution, the key question has become, if the struggle between Islamic reformists and Islamic conservatives is legal or political". Whereas Europe was living the 1968 revolution and countries like Italy and France continued the struggle until 1977-1979 and England was going through a period of deep recession, the Muslim world was witnessing the first Islamic Revolution in Iran (1979). In Martin, Richard C. *Encyclopedia of Islam and the Muslim World*, New York: MacMillan Reference, 615-616.

²²⁶ Anwar, Alam. *Religion and State. Egypt, Iran and Saudi Arabia (a comparative study)*, 61.

conduct became a trend. It is interesting to notice how political decisions, rhetorical discourses, and social events contributing to a new economy or Islamic fashion, which has since flourished and has come to international attention with the Abaya Fashion Show, held for the first time in Dubai in 2011. A piece of garment—the veil—emerges again as a central issue, one that is more political than could be imagined. Sadat’s relentless attempt to reveal “the right path”²²⁷ to the Egyptians didn’t only result in the suppression of anti-regime demonstrations but also emerged in a new wave of the embracing of Islamic symbols, amongst which includes the veil. As previously argued, the veil was the symbol of women’s active participation in anti-colonial struggles; it was thrown off when the Egyptian Constitution let women down not granting them the right to vote in 1924, and was embraced again when colonisation seemed to be coming back through economic and financial aid coming from Western powers. These elements clearly show the emergence of a very important and multiple issue, the veil, symbol of resistance and a dense set of relations that span from political rhetoric and plans, rejection, and embrace to being a trendy piece of garment, also going through becoming a symbol of nation-state ideology and the search for identity.

Despite the issue of education being less-prominent, it is however worthy of analysis because it was used in anti-colonial struggles, opposed in Islamic extremism as a western principle; it was promoted during the British protectorate and, as such, opposed by traditionalists and anti-colonialists alike. At the same time, the issue of education is an issue tout court because it expanded to include women’s rights, their positions as citizens in the Nasserite regime, and after the 1919 revolution alike. Education didn’t stop with the opening of charitable schools but went to include reflections of women as part of the Egyptian society, considerations on the nuclear family, and challenged, also, common practices of seclusion.

²²⁷ Anwar, Alam. *Religion and State. Egypt, Iran and Saudi Arabia (a comparative study)*, 93.

These two issues emerge insistently across all layers I have considered for this project and re-emerge also with the technowomen, in the technology layer. They exist in relation to many other issues and, as these sections have highlighted, enmesh and intermingle with various actants within the same layer. Given their prominence, these two issues have become part of the list of initial keywords I have considered and will discuss in the next chapter.

3.5 Saudi Arabia: Vernacular Islam and petrodollars

“Understanding Saudi Arabia isn’t easy. The best metaphor I’ve come up with is to imagine the Amish had their own country and they suddenly became super-rich from a mineral resource.”²²⁸

This sentence posted on the blog of an American student attending the first Saudi mixed university could summarise the sudden wealth of a very “abstemious, austere and pietistic society” like Saudi Arabia.²²⁹ The Kingdom of Saudi Arabia is very young. As William Ochsenwald wrote at the dawn of the 1980s Islamist Revival, despite it being the cradle of Islam, the country played a very marginal role in the political and economic encroachment by the West of Middle Eastern countries.²³⁰

Despite the history of the Kingdom it is, as Anwar Alam highlights, a history of religio-politics of power,²³¹ several aspects of the development of the country, from the discovery of oilfields to the wealth and Western

²²⁸ Posted by an American student and blogger thought to study in the newly established mixed university in Jeddah. What's Been and What's Ben, “Custodians.” Posted August 30th, 2012. [Online]. Available at: <http://www.benfrevort.org/?p=507> . Last accessed 1 March 2013.

²²⁹ Ochsenwald, William. “Saudi Arabia and the Islamic Revival.” *International Journal of Middle Eastern Studies*, Vol. 13, No.3, 1981, 271-286. 272.

²³⁰ Ochsenwald, William. “Saudi Arabia and the Islamic Revival”, 272.

²³¹ Anwar, Alam. *Religion and State. Egypt, Iran and Saudi Arabia (a comparative study)*, 18-21.

immigration in the 1950s and 1960s, tell a story that hasn't been so far fully analysed. At the same time, talking about women's issues in the country is a difficult task, given the lack of a women's movement or any political association, since they are banned in the Kingdom. It also could be argued that an analysis of women's issues strongly intertwines with an analysis of the socio-political events of the country, continuously torn between Islam and modernisation. The Kingdom of Saudi Arabia, as previously argued, is ruled by the Wahhabi's doctrine of Hanbali inspiration and its unification happened through the strategic partnership between the Al-Saud dynasty and Al-Wahab. As such, the Qur'an is read in its strictest meaning and it is considered the Kingdom's Constitution. The legal framework of the country is fully regulated by and through the Shari'a.

As it will be highlighted, fatwas are important actants, politically relevant and all-encompassing rules that have not spared women's roles, issues, and political battles. With regards to women's positions, roles, and status, in fact it will be necessary to go back to the controversial suwar I discussed in the previous chapter to understand how certain issues emerge, where they stem from, and what they stand for. The analysis of the technology layer has highlighted the persistence of the driving ban, an important issue for women in the kingdom. In order to understand how the driving ban can be considered an issue, it is necessary to understand where and how Qur'anic verses, the Wahabi's readings, and fatwas meet with political and social events, Internet connection, and women's incessant campaigns.

One of the issues that immediately emerges in an analysis of women's issues in the country is the ban of gender mixing, or *ikhtilat*. This ban doesn't seem to have any direct reference to the Qur'an; however, it has become an increasingly controversial topic that emerges across several layers and involves different actants, such as a fatwa in 2012 to build walls to divide genders when mixing becomes an inevitable situation; at the same

time, concepts such as revisionism and awakening assume a completely different meaning when compared to Egypt. As Ochsenswald maintains, the country's exposure to the previously introduced movement of *Al Nahda* was very minimal, as was the exposure to the revisionism proposed by Muhammad Abduh or Qasim Amin. As previously stated it is not possible to talk about women's activism in Saudi Arabia nor it is possible to talk about liberal and modernist movements in the country. Any political association is banned and national guards police streets and public places guaranteeing the strict application of Islamic precepts.

3.5.1 Wahhabism, Islamic development and women's issues

Saudi Arabia has never been colonised and the kingdom was still fighting for domination of the Arabic peninsula at the dawn of the 19th century. Egypt and Saudi Arabia's history share few similarities. As I have previously touched upon, Saudi Arabia and Egypt lived out a rather difficult relationship during the Nasserite regime, usually addressed as the Arab cold war. As can be read in Ochsenswald's accounts, Saudi Arabia was first unified under the Saudi dynasty in the early 1800s, to just be destroyed by the "combined troops" of Muhamad Ali of Egypt and Al-Rashid (ex ruler of Riyadh) in 1810.²³² In the 1880s, civil war erupted for the control of the territory between the Rashidis of Hail. In 1902 Amir Abdel Aziz Al-Saud founded the second Wahhabi State.

It is only in the 20th century, in 1933, that the country became the nation-state it is now, with a ruling class and a ruling family. Abd al-Aziz ibn Saud (1879-1953) was crowned king of the newly born state, a ruler that chose to amplify the religious significance of his rule and "organized a

²³² Anwar, Alam. *Religion and State. Egypt, Iran and Saudi Arabia (a comparative study)*, 174.

network of religious instructors”²³³ to propagate Wahhabi principles. Behind the rhetoric of strict observer of the Islamic religion, there is the hidden contribution of the military force of the *Ikhwan*—made of settled Bedouins united by the passion for a revivalism of Islamic values—and of the *Ulama*, the religious authorities.²³⁴ With Abd al-Aziz ibn Saud the country came to be a descent-based ruled country that owes its own name and denomination to the ruling dynasty.

Through the set of alliances between the *Ikhwan*, the *Ulama*, and the political and military power of Al Saud, Wahhabism became the legitimate power of the kingdom. An analysis of women’s issues, as previously introduced, cannot preclude an analysis of the socio-political circumstances that constitute the kingdom. The role of the Wahhabi *Ulama* was to originally “supply religious justification”; *Ikhwan* was to serve the purposes of a reserve army and “weaken tribal loyalty”.²³⁵ The *Ikhwan* and the *Ulama* helped decisions over every aspect of the social, political, and economic life. In 1962 *Ikhwan* denounced King Saud for allowing the introduction of non-Shari’a laws and introduce innovations, amongst which were transport and communication. They were dispersed and outlawed; a weakened *Ikhwan* led to the strengthening of the *Ulama*’s strategic relevance in the country.

²³⁶

Power is given to the *Ulama* through the “Committee for commanding the Good and Forbidding Evil” or the religious police (*mutawwa*). *Ulamas* rule over a variety of behaviours and circumstances, from alcohol and tobacco to women’s coving and Western entertainment,

²³³ Anwar, Alam. *Religion and State. Egypt, Iran and Saudi Arabia (a comparative study)*, 178.

²³⁴ The *Ikhwan* were outlawed and fought soon after the victories achieved in the 1920s and the military control of most of the Arabic peninsula was secured. Anwar, Alam. *Religion and State. Egypt, Iran and Saudi Arabia (a comparative study)*, 178.

²³⁵ Anwar, Alam. *Religion and State. Egypt, Iran and Saudi Arabia (a comparative study)*, 178.

²³⁶ Anwar, Alam. *Religion and State. Egypt, Iran and Saudi Arabia (a comparative study)*, 178.

music, and Shari'a. Such rules are usually addressed as *fatwas* and they are of fundamental importance. It is through fatwas that the country could move toward modernisation. The king justified almost every act of state formation and every modernising factor through fatwas. King Abd Al Aziz "legitimized photography as bringing together [...] light and shadow [...]" both "divine creations" and, as a consequence, "acceptable."²³⁷ Similarly, radio, telephone, and TV were only allowed with a fatwa when the Ulama came to understand "[...] the benefits of the mass communication system in the teaching and practice of the Qur'an."²³⁸

A newly formed state, Saudi Arabia made of Islam one of the main economic resources before the discovery of oil wells. After the formation of a kingdom, the unfriendly desert soil made it difficult to start any sort of activity that could generate profit. The presence of Mecca and Medina and their religious weight made the Kingdom economically dependent on the *Hajj*, or the annual pilgrimage to Mecca. Data extrapolated from the Supreme Hajj Pilgrimage—organised in 1966— show a steady increase of pilgrims between 1950 and 1970.²³⁹

The relevance of Islam in economic terms could be seen as fundamental for the radicalisation of the Islamic discourses of observance and implementation of religious principles. Attracting hundreds of thousands of Muslims to Mecca and Medina, the kingdom was to send a message of devotion to Islam and complete application of Qur'ānic behavioural requirements. Since the conquest of Mecca in the 1920s, what allowed Saudi Arabia to gain visibility on a regional and religious level was such devotion, the war on any forms of atheism (hence the USSR and its Arab influence on countries such as Egypt), and Zionism, which led to

²³⁷ Anwar, Alam. *Religion and State. Egypt, Iran and Saudi Arabia (a comparative study)*, 191.

²³⁸ Anwar, Alam. *Religion and State. Egypt, Iran and Saudi Arabia (a comparative study)*, 191.

²³⁹ Ochsenswald, William. "Saudi Arabia and the Islamic Revival", 271.

declaring a Holy War on Israel in 1969. The preservation of Islamic principles can also be found in the country's efforts to create a *ummah* (community) through Leagues, such as the World Muslim League, conferences, and meetings held by Muslim states with the aim to expand the Kingdom's political relevance as the bastion of Islamic principles.²⁴⁰

The wealth provided by Islamic devotion came to play a secondary role with the discovery of the first oil fields in the 1930s; Ulama's intervention allowed the collaboration of the country with British and American companies to build the first oil wells.²⁴¹ The wealth accrued by the upper classes of the 1950s created an uncomfortable situation. Many factors occurred: from internal and international migration to a steady, growing demand of Western commodities and luxury goods. The Hajj was no longer to be considered the first source of profit and economic lever of the Kingdom; oil revenues grew from \$40 billion in 1977 to \$250 billion in the period between 1980 and 1985.²⁴² Despite the House of Saudi being seemingly at ease with the contradiction of a wealthy and Westernised lifestyle and the Islamic principles on which the country was based upon, the first cracks started to surface with the seizure of the Mecca Mosque in 1979. The attack came at a time of great changes.

As previously highlighted, fatwas allowed the spread of mass communication like the press, radio (in the 1960s as a response to Nasserite's propaganda), and TV in the 1970s; at the same time, through a fatwa the King was able to open secondary schools for women in 1962 and promote jobs and education abroad.²⁴³ These progressive reforms, made possible by the mechanisms of religio-politics, came to a halt in 1979 with

²⁴⁰ Anwar, Alam. *Religion and State. Egypt, Iran and Saudi Arabia (a comparative study)*.

²⁴¹ Anwar, Alam. *Religion and State. Egypt, Iran and Saudi Arabia (a comparative study)*, 192.

²⁴² Ochsenswald, William. "Saudi Arabia and the Islamic Revival", 273-274.

²⁴³ Keddie, Nikki, R. *Women in the Middle East: past and present*, 90.

the seizure of the Kaaba Mosque by the *Mahadist* group. The seizure of the Mosque highlighted the Kingdom's weakness and its contradictions. However, social tensions had already erupted in the 1960s as a response to growing modernisation of the country. In 1965 the Ulama took the streets for the first time against the "government decree to construct TV stations in the Kingdom."²⁴⁴ The seizure of the Mosque came at the height of the Kingdom's economic development and the Mahadist's religious zeal met with issues of wealth redistribution, an unexpected oil boom, and profound changes in the social environment due to the increased internationalisation of job positions in the oil industry. These elements—although apparently unrelated to women's position—contribute to map discourses and discussions on women's invisibility, their participation (whether voluntary or not) in the strict Islamic principles to which the country adheres, and the ways in which these elements help co-constitute women's issues in the country.

3.5.2 Women's invisibility and the social construction of space

Saudi Arabia is a young country and its history cannot be aligned to that of Egypt. However, as this chapter has outlined so far, the country underwent several and sudden changes, from legal reforms, such as the abolition of slavery and concubinage in 1962, to the introduction of media of communication, transport, and education for women. As already discussed, the country is based on a set of unwritten rules that leave much space for political manoeuvre at the hands of religious authorities and *mutawwa*. Courts can apply capital punishments, amputation, and flogging. Women and men are required to dress modestly; women cannot drive and must wear the Abaya or the full body and face cover, although—as I could

²⁴⁴ Anwar, Alam. *Religion and State. Egypt, Iran and Saudi Arabia (a comparative study)*, 198.

learn from reading blogs—some have gradually started to expose their faces, and in some parts of the country, black is no longer worn.²⁴⁵ The lack of written legislation and the hierarchical organisation of religious authority has led (and still leads) to innumerable *fatwas* (Islamic rulings coming from religious authorities) on the broadest (and sometimes improbable) variety of topics.

The country's conservative *mores* are also mirrored in architecture.²⁴⁶ As Abu-Gazzeah highlights, "the subject of sex ethics and manners is the determining factor in the segregation of males and females [...]"; as I previously discussed, mix-sexed situations are forbidden. The architectural and social dimensions are "[...] fundamental to the daily life of people in the society of Saudi Arabia." Partitioning of private and public spaces is not exclusive to Saudi Arabia,²⁴⁷ however architectural respect of segregation in the country further highlights and stresses the difference between males and females that is strongly felt by religious authorities. Separation of sexes exists in work settings; schools and universities are sex-specific, with the only exception of the newly built King Abdullah University of Science and Technology; "even sitting and waiting areas in [...] places as mosques, hospitals and airports" ²⁴⁸ reflect the segregation and the secondary position of women. Private spaces are also lived according to segregation.

²⁴⁵ Saudiwomanblog first talked about her uncovering her face in 2012. Since then, pictures of fairs where men and women mix and women wear the abaya without the face cover can be found online. For an example, <http://saudiwoman.me/2014/03/13/sixth-of-november-at-the-riyadh-book-fair/>.

²⁴⁶ Tawfiq, Abu-Gazzeah. "Privacy as the Basis of Architectural Planning in the Islamic Cultures of Saudi Arabia." Özkan, Süha (ed). *Faith and the Built Environment: Architecture and Behavior in Islamic Cultures*, Lausanne: Comportements, 1996, 269-288.

²⁴⁷ Hashim, Ahmad Hariza and Abdul Rahim, Zaiton. "The Influence Of Privacy Regulation On Urban Malay Families Living In Terrace Housing." *International Journal of Architectural Research*, Vol. 2, No. 2, July 2008, 94-102.

²⁴⁸ Tawfiq, Abu-Gazzeah. "Privacy as the Basis of Architectural Planning in the Islamic Cultures of Saudi Arabia", 275.

Space is arranged in a way that reflects gender difference and “[...] (gender is) used as a basic organizing device for the partitioning of space”, in spite of the significant changes the kingdom has been undergoing since its establishment and the increasing participation of women in the labour force.²⁴⁹ However, traditionalist backlashes continue to alternate with these waves of modernisation; an example could be offered by Adel Faqih’s and Abdullatif al-Sheikh’s²⁵⁰ order in 2013 to build walls to separate women and men forced to work in the same environment (Fig. 2 and 3 for an example). The fatwa wanted to solve the issue of increasing education and religious requirements of gender segregation; the physical walls built in public spaces were recommended to be set at a minimum height of 1.6 metres.²⁵¹ However, these extreme moves are counter balanced by equally radical decisions; women are, in fact, becoming increasingly part of the labour force, especially in business, management, and legal practices; they are slowly gaining more rights, the most visible of which was the participation of Saudi women in the 2012 Olympic Games in London, and the recent decision to introduce physical education in girls’ schools.²⁵²

²⁴⁹ As the scholar highlights, Saudis tend to let “white walls” create separation in the house and use curtains to create additional spatial separation. This is especially the case in new buildings, which are either built following Western architecture or are built by Westerners. Tawfiq, Abu-Gazzeh. “Privacy as the Basis of Architectural Planning in the Islamic Cultures of Saudi Arabia”, 276.

²⁵⁰ Abdullatif al-Sheikh is head of the Commission for the Promotion of Virtues and Prevention of Vice.

²⁵¹ Osborne, Hannah. “Saudi Arabian Shops Build Walls to separate Men and Women.” *International Business Times*, 29 January 2013. Available at <http://www.ibtimes.co.uk/articles/428989/20130129/saudi-arabia-segregation-sex-walls-built-shop.htm>. Last Accessed 21 March 2015.

²⁵² The Economist. “Women in Saudi Arabia: Unshackling themselves. Saudi women are gaining ground, slowly.” 17 May 2014. [Online]. Available at: <http://www.economist.com/news/middle-east-and-africa/21602249-saudi-women-are-gaining-ground-slowly-unshackling-themselves>. Last accessed 21 March 2015.

Figure 2: *Saudi Women in a Shop* [<https://echodepiction.wordpress.com/category/life-in-saudi/page/2/>]



Figure 3: *Separation wall in McDonalds* [<http://www.ibtimes.co.uk/articles/428989/20130129/saudi-arabia-segregation-sex-walls-built-shop.htm>]



Although architecture seems to be only partially relevant to an analysis of women's issues in the country, it becomes central because it mirrors, reflects on, and simultaneously reinforces concepts of gender segregation and gender hierarchies. The central issue that emerges already is that of visibility of the woman; it exists and emerges through several actants, physical walls that divide women from men, but also the veil that, as previously discussed, is the abaya, a black cloth that covers women from head to feet, leaving uncovered (depending on the woman's choice) either the eyes or the face. The issue of visibility also emerges with regard to the legal 'value' of the woman and her role as a citizen. Women can obtain a passport only after the authorization of a male guardian and the right to vote is non-existent.

This rather intermingled network of the visibility issue extends to include the issue of education that re-emerges in this particular layer and in

this particular locale. As highlighted, women's education was only allowed in 1962 thanks to the initiative of Prince Faisal, who also embarked on an ambitious project of modernisation of the country with the establishment of courts, governmental institutions, and attempting to increase political participation, halted by the 1979 seizure of the Kaaba Mosque.²⁵³

As previously introduced, gender segregation has led to the establishment of schools and universities for women; however, the physical segregation is coupled by the imposed and limited choice of subjects women can choose to study. Women could originally access education because a fatwa clarified that the curriculum would be complying with the requirements of the Qur'an and would focus rather significantly on the teachings of the Qur'an. As Abu Gazzeh highlights, segregation also applied in the professions; engineering and architecture were originally banned and so were the study of law²⁵⁴ and business.

However, the introduction of international schools for girls and the possibility to study abroad have created a new class of professionals that are no longer linked to the fields of journalism or education. At the time of this thesis, data suggests that women represent 60% of the students in the Kingdom; although their focus is mainly education, women as labour force are entering the most disparate fields. According to *Asharq Al Awsat* in fact, whereas 75% of the women's work force is employed in catering and fashion as well as education and journalism, the percentage of women working in male-dominated sectors is increasing.²⁵⁵ This increase also

²⁵³ This decision was however withdrawn following the 1965 strike of ARAMCO (Saudi Arabia owned Oil Company) workers. The government used the strike to justify the ban on any political association and public demonstrations.

²⁵⁴ Women can however assist women clients. In January 2014 the first law firm led by women lawyers was licensed in the kingdom to defend women's rights in the country.

²⁵⁵ Al-Khattaf, Eman. "Saudi women challenging male business monopoly." *Asharq Al Awsat*, 23 October 2013. [Online]. Available at <http://www.aawsat.net/2013/10/article55320649> Retrieved 15 October 2014.

brings with it issues of control, respect, and acceptance of women in positions of authority. Women's increasing participation becomes especially visible online, despite the problematic situation of Internet control, discussed in the next section.

3.5.3 Women's issues, the Internet and alternative forms of communication

Although political association is forbidden and women are not considered capable of making political decisions (let alone associating for political reasons), their voices have been heard and their activities moved beyond the comfort of their homes. Women have campaigned for their rights using a variety of strategies and tactics. The first women's demonstration in the country dates to 1991. As previously highlighted, women in the country cannot drive, public demonstrations are forbidden, and "freedom of expression is severely restricted."²⁵⁶

The government owns all media and applies heavy restrictions on content through the Information Ministry. In 1994 the government outlawed private satellite dishes and in 1999 the Internet was introduced. In 2001 a Council of Ministers Resolution decreed that service providers be able to determine a full identification of users and track all their activities and report them to the so-called proxies, programs that sit virtually between the Internet and the user's access.²⁵⁷

²⁵⁶ The Freedom House Report "Saudi Arabia 1999." [Online]. Available at <http://freedomhouse.org/report/freedom-world/1999/saudi-arabia> . Last accessed 2 October 2014.

²⁵⁷ "Service providers shall determine internet access eligibility through access accounts, user identification and effective passwords for the use of the access point or subsequent points and linking that through tracing and investigation programmes that record the time spent, addresses accessed or to which or through which access was attempted, and the size and type of files copied, whenever possible or necessary." Council of Ministers Resolution "Internet Rule 2001." 12 February 2001, [Online]. Available at: <<http://www.al-bab.com/media/docs/saudi.htm>>. Last accessed 12 October 2014.

Despite the filtering,²⁵⁸ which is heavily criticised by all parts of the Saudi society, Saudi Arabians mastered alternative uses of the internet since its early days, with encrypted messages, mirror sites and proxy servers;²⁵⁹ at the same time, women have found their space and have taken action. The first public demonstrative act can be dated back to 1991, when women defied the ban to drive and drove in Riyadh.

As previously stated, women in Saudi Arabia are forbidden from driving and require a chauffeur or a male relative to drive them around. In the early 1990s women took to the street for the first time, challenging the driving ban imposed by the Kingdom; manifestations took place again in 2011, 2012, and 2013.²⁶⁰ In all these demonstrations, women have taken a stand against the political and religious inadequacy of the country requesting an increased political role and participation in public life.

However, there is a silent form of resistance that must be taken into account when looking at the issue of the driving ban. In rural Saudi Arabia, women drive without male relatives because of the lack of transportation and the need for mobility (Fig. 4, an example). These aspects have very seldom surfaced as part of the issue in the online analysis of bloggers and driving campaigns. Pictures of women driving in rural parts of Saudi Arabia

²⁵⁸ It must be noted that the filtering applies through keywords and URLs and also through other randomized searches. However, there have been accounts of medical journals being filtered along with scientific sites. Zittrain, Jonathan and Edelman, Benjamin. "Documentation of Internet Filtering in Saudi Arabia." Berkman Center for Internet and Society, Harvard School of Law, 2002. [Online]. Available at: < <https://cyber.law.harvard.edu/filtering/saudi-arabia/> >. Last accessed 8 July 2015. According to the King Abdulaziz city for Science and Technology's Internet Service Unit the type of material which is usually blocked "consist mainly of pages related to drugs, bombs, alcohol, gambling and pages insulting the Islamic religion or the Saudi laws and regulations." King Abdulaziz city for Science and Technology - Internet Service Unit. "Introduction to Content Filtering." [Online]. Available at: < <http://www.isu.net.sa/saudi-internet/content-filtering/filtering.htm> >. Last accessed 8 July 2015.

²⁵⁹ Bernardi, Chiara Livia. "Resistance through algorithm: the case of Saudi Arabia." *Nyx 7: Machines*, Issue 7, Spring 2012, 116-121.

²⁶⁰ Murphy, Caryle. "Saudi Women Reunite To Remember Driving Protest." *NPR*, 16 Dec 2008, [Online]. Available at: <<http://www.npr.org/templates/story/story.php?storyId=97541372>>. Last retrieved 4 November 2013.

have been shared online, but this rather important element doesn't seem to be a constitutive part of the challenges to the driving ban, although it is part of the issue of driving and, it could be argued, enriches and multiplies the issue itself. This particular element reminds one very much of the previously discussed case of Law 25 of 1920 and 1929 of the Egyptian Personal Status Law. Despite this omission, I would argue that this element is important in the contextualisation and understanding, as well as the mapping, of women's issues in these two countries, and it cannot be ignored, regardless of the inability to develop a greater discussion about it, given the current lack of information.

Figure 4 Women driving in rural Saudi Arabia
[<http://taraummomar.wordpress.com/2011/04/26/women-driving-in-saudi-arabia-my-personal-thoughts/>]



These discussions highlight the contradictory scenario of a young country that moves between modernisation and traditionalism. Women's roles and their position in the cultural texture of the country assume a relevance that hasn't been seen in Egypt; their forced invisibility and the excessive zeal to undermine their increasingly central role in the making of the country makes them very visible. To add to this, the wealth of information that digital platforms such as blogs, Facebook pages and groups and Twitter, discussed in due course, highlight how women's issues become multiple, controversial, and emerge as rather heated discussions online.

3.6 Conclusion

This chapter has discussed the localities of what emerge as women's issues in Egypt and Saudi Arabia. I have analysed the histories and followed the issues that emerge following debates, positions, movements, and activities with regard to women in the two countries. The element that emerges is the entanglement of women's issues with every aspect of the social, political, and economic life and the specificity of each country. The stories and histories followed in this chapter have highlighted how specific and at times indirectly related events and situations, like the case of Saudi architecture, contribute to the formation and transformation of women's issues.

The issues of guardianship, education, and veiling practices have re-emerged and intermingled with nationalist identity, nationalisms, and anti-Western rhetoric. However central, there is no intention to say that the main problematic discussions I have highlighted and followed those topics, debates, and discussions that constitute women's issues in each of the two analysed countries. However, given their prominence and their centrality in articulating discourses on women's empowerment and liberation, I will consider these issues as part of my online analysis, the construction of which will be offered in the next chapter.

Chapter 4: Social network analysis and visualisation tools used

4.1 Introduction

Current debates and discussions on the role of digital media in society are increasingly including software and algorithms that hide a complex “[...] background of timetables, routes, directories, address systems, transactions [...]” on which “position, order and sequence rely [...]”.²⁶¹ In previous chapters I have discussed disciplines and new methods of analysis that have engaged with software, and its contribution to current cultural practices.²⁶² Despite such growing attention, I have also highlighted how a reflection on the intertwining of software, women’s issues in a Middle Eastern context, and digital media is yet to be fully embraced by women’s studies and gender studies.

In this chapter I will propose and discuss the ways in which I have combined the important theoretical reflections on the cultural impact of software and the multiple lives of a number of women’s issues; I will firstly introduce the visualisation tools employed to map women’s issues in Egypt and Saudi Arabia, as they emerge online. Issues such as the veil, women’s education but also the driving ban, seclusion, and the concept of guardianship have emerged in previous chapters as central and multiple, often contradictory carriers of important political meaning. In this chapter I will discuss the tools and the procedures I have followed to map and discuss how much of the issues that emerged throughout exist, can be found, or are transposed online. I will also touch upon the limitations posed by software visualisation tools and automated hyperlink crawling.

²⁶¹ Mackenzie, Adrian. *Cutting Code: Software and Sociality*, 44.

²⁶² Marino, Mark. “Matthew Fuller in conversation with Mark Marino.” *E-media studies*, Vol.3 Issue 1, 2013. [Online]. Available at: <<http://journals.dartmouth.edu/cgi-bin/WebObjects/Journals.woa/xmlpage/4/article/429>>. Last accessed 19 November 2014.

Before moving into a discussion of the visualisation tools used during this research, I will proceed with the introduction of graph theory and social network analysis, whose principles and metrics are core to the research.

I have so far used the idea of the network as a constitutive part of the multi-layered map because I have traced the networked reality and multiple lives of women's issues. However the term network has entered our everyday lives due to the extensive use of social media. The idea of the network finds its roots in graph theory and its implications have reached varied layers, from informatics to social relations. I will briefly introduce Graph Theory and Social Network Analysis and then move to its new modes of application in social media and the digital world. These topics will then be touched upon in the conclusion, where I will highlight the pitfalls of visualisation, network analysis, and future perspectives.

4.2 Graph Theory and the network

From a mathematical point of view a network is a set of vertices connected via edges where vertices are nodes and edges are links.²⁶³ There are several types of networks, and a vast field of empirical analyses exist on numerous entities, ranging from cells to the Internet, and are organised following a network structure.²⁶⁴ The study of networks pertains to mathematics and physics and can be traced back to the bridges of the Königsberg experiment that took place in 1736.²⁶⁵ The then Prussian city of Königsberg had seven bridges, and in the 18th century several experiments

²⁶³ Wählich, Matthias. "Modeling the Network Topology." Gross, James, Gunes, Mesüt and Wehrle, Klaus (eds), *Modelling and Tools for Network Simulation*, Heidelberg: Springer, 2010, 471-486, 473.

²⁶⁴ Barabási, Albert-László, "Emergence of Scaling in Random Networks." *Science Magazine*, 15 October 1999, 509-512.

²⁶⁵ The problem started much earlier than the 1800s but the birth of Graph Theory is usually associated with Euler's solution of the Königsberg's bridges.

had failed to demonstrate that they could all be crossed exactly once without re-crossing the same bridge. Leonhard Euler tried to understand how to cross the city's seven bridges all at once by using graphs.²⁶⁶ More specifically, he approached the Königsberg bridges puzzle mathematically, by interpreting the bridges as edges and the locations as vertices. Using this method, Euler concluded that there were more than two vertices of odd order and a graph could not be traced; it was therefore not possible to cross all the bridges without re-crossing at least one bridge more than once.

Figure 5: Bridges as divided by Euler
[<http://mathworld.wolfram.com/KoenigsbergBridgeProblem.html>]

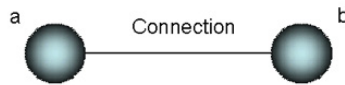


Euler's solution of the Königsberg's bridges set the grounds for graph theory²⁶⁷ and topology; his analysis in fact implicated a geometry based on connectivity rather than distance. Graphs are the networks, consisting of nodes and links—or connections. Nodes establish relations of different types, represented in a bi-dimensional drawing (Figure 6 and Figure 7).

²⁶⁶ Euler is considered the father of Network Theory. Network Theory has been applied to various fields from biology to computer science and sociology. It is part of computer studies, network studies and graph theory. It is based on the analysis of the relationship between entities.

²⁶⁷ Euler, Leonhard. "Solutio Problematis ad Geometriam Situs pertinentis", originally published in *Commentarii academiae scientiarum Petropolitanae* Vol.8, 1741, 128-140. In O'Connor, John J. and Robertson, Edmund F. *A History of Topology* [Online]. Available at: <http://www-history.mcs.st-andrews.ac.uk/HistTopics/Topology_in_mathematics.html>, last accessed 12 December 2014.

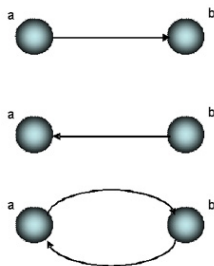
Figure 6: *Bi-dimensional Connection* [Callon, 145]²⁶⁸



Connections between nodes, as previously explained, can be of different types:

- *Non-directional connections*: there is no specific direction between the two nodes, or dyads. An example could be metallic solids, like mercury whose non-directional (and non-polar) bond allows atoms to move past one another without altering or disrupting their interactions. But a non-directional connection could also be the merger of two companies or a marriage; if it is in fact true that one individual is married to the other, the reverse is also true.
- *Directional connections*: a node is central for another to survive or exist and a situation of origin-destination arises. The relation between Demand and Offer explains such type of connections.

Figure 7: *Dyads' type of connections*²⁶⁹



In non-direct graphs there is one possible relation between two nodes. Taken a node *a* and a node *b*, their directionality can only be either from *a* to *b* or vice-versa. On the contrary, in direct graphs two nodes can

²⁶⁸ Callon, Michel, "Techno-economic networks and irreversibility." Law, John (ed). *A Sociology of Monsters: Essays on Power, Technology and Domination*, London: Routledge, 132–165, 145.

²⁶⁹ Callon, Michel, "Techno-economic networks and irreversibility," 145.

have two directions (from a to b and vice-versa), thus leading to the conclusion that in a three-nodes network there are six connections and so forth.

The problem arises when complex connections come to the fore. Graph theorists and researchers in Sociometrics (Social Network Theory), explained below, developed matrices in order to respond to complex relations.

4.3 Social Network Analysis (SNA)

The roots of Social Network Analysis can be found in the early 1800s in the work of Auguste Comte that defined society as more than a group of people and later, at the beginning of the 20th century, with George Simmel, who focused on the dynamics of group aggregation and influence on individual behaviours.²⁷⁰ However, Social Network Analysis is usually associated with the work of Jacob Moreno, who developed the core components of the discipline, or measures, maps, and models. In 1934 Moreno published the work “Who Shall Survive” where he used mathematical models derived by Graph Theory (Network Theory).²⁷¹ Jacob Moreno developed Sociometry, a methodology that would allow the mathematical analysis of social relations, and opened the doors to interdisciplinary analysis that spans from sociology to anthropology.

Between the 1930s and the 1950s Social Network Analysis grew and new methods and analytical tools were introduced, along with algorithms and mathematical paradigms to calculate how social networks are formed,

²⁷⁰ Hansen Derek L., Shneiderman, Ben, and Smith, Marc A. *Analysing Social Media Networks with NodeXL: Insights from a Connected World*, Burlington, MA: Morgan Kaufmann: 2010, 38.

²⁷¹ Moreno, Jacob L. *Who Shall Survive? A New Approach to the Problem of Human Interrelations*, Washington: Nervous and Mental Disease Publishing, 1934.

how they evolve, and what effects they produce. The costs of gathering data and manually analysing it and the unavailability of computing techniques to help the manipulation of data made Social Network Analysis of difficult application. The discipline blossomed in the 1960s when computation and new concepts started to be developed and applied to a wide range of domains.

The coincidence of the blossoming of SNA and computing is not casual. It was in fact the introduction of computers that helped automate data analysis and introduce of computed network visualisation tools.²⁷² Stanley Milgram famously explored the idea of the 'small world' but other experiments and works deserve attention and discussion; in 1977 Mark Grovenotter researched the relevance of 'weak ties' hypothesising that in a social network, a node has higher probabilities to gain more information from an "acquaintance" than from a "close friend."²⁷³ The study demonstrated that non-central actors in a network can influence the topology of the overall network itself. These principles are important for an understanding of the online analysis of women's issues that will also draw upon Albert-László Barabási's observation on the distributed nature of the world wide web and its diameter.²⁷⁴ In his work with Réka Albert and Hawoong Jeong, Barabási defined the world wide web as a distributed network or a "large directed graph whose vertices are documents and whose edges are links" that point from one document to another.²⁷⁵ The network undergoes a constant and "unregulated growth" that can still be

²⁷² Freeman, C. Linton. *The Development of Social Network Analysis: A Study in the Sociology of Science*, Vancouver: BookSurge, 2004, 36-39.

²⁷³ Grovenotter, Mark. "The Strength of Weak Ties." *American Journal of Sociology*, Vol.78, Issue 6, 1973, 1360-1380.

²⁷⁴ Albert, Réka and Barabási, Albert-László. "Emergence of scaling in random networks." *Science*, 286, 509-512, 1999.

²⁷⁵ Barabási, Albert-László, Jeong, Hawoong, and Albert, Réka,. "Diameter of the World Wide Web." *Nature*, Vol.401, September 1999, 130.

mathematically controlled and calculated. In their experiment, the world wide web was attributed a diameter of 19 links, indicating that “two randomly chosen documents on the web are on average 19 clicks away from each other.”²⁷⁶

In the 1990s, Jon Kleinberg identified patterns of links between web pages and developed the Hyperlink-Induced Topic Search algorithm (HITS) that would become the main inspiration for Google’s PageRank, as later discussed. The basic idea proposed and developed by the computer scientist was that one page can link to another, forming a complex network of linked documents.²⁷⁷ He also corroborated Barabasi’s theory of the distributed nature of the Internet and the web as networks made of hubs and periphery. Kleinberg highlighted in fact that some documents received more pointers than others. His algorithm was therefore based on this assumption and was denominated by the ‘hubs and authority’ algorithm. The pointers (or the link from one page to another) came to be indicators of value (prestige) on the network. Since the 1990s the Internet and the world wide web have been widely analysed in terms of their network structure and in terms of networks’ spatial visualisation.

Pages’ URLs represent the ‘nodes’, and their centrality and prestige (discussed later in the chapter) are calculated in connection with the number of edges they generate (outlinks) and receive (inlinks) within the network. These two metrics are at the base of an understanding of the network’s topology and help predict its behaviour (type). In fact networks can be of different types and can have different topologies. In particular, Alberto Laszlo Barabási and Reka Albert observed how the majority of

²⁷⁶ Barabási, Albert-László, Jeong, Hawoong, and Albert, Réka, “Diameter of the World Wide Web.” The scientists predicted that the constant growth of the World Wide Web wouldn’t influence such diameter that could remain within the range of 19-21 clicks.

²⁷⁷ Hansen Derek L., Shneiderman, Ben and Smith, Marc A. *Analysing Social Media Networks with NodeXL: Insights from a Connected World*, 42-45.

complex networked systems are organised as scale-free networks. Simply put, a scale-free network is made of nodes that can establish unidirectional relations (from a to b) with other nodes as well as multidirectional ones (reciprocal connections); in scale-free networks, nodes connections can be undirected and directed. In a scale-free network, edges can be translated into weighted or unweighted data; unweighted data represent the existence or inexistence of a relation between two nodes (or an understanding of whether a point a connects to a point b); weighted data represent instead the nature of the relationship (or connection degree). Another important characteristic of scale-free networks is their hub-and-periphery organisation, or the centrality of certain nodes within the network. This particular structure determines the robustness of the network or its ability to avoid failure and guarantee the network's connectedness.²⁷⁸

Data is usually represented on grids and visualised through nodes and arrows of different width that depend on the weighted relation between the edges. Common features to networks are:

- Small world effect: corroborates the idea that real world networks are structured following a hub-periphery structure.

- Transitivity: the presence of a heightened number of triangles in the network. Such a principle infers that if a node a is connected to a node b and node b is connected to a node c then, there is a high probability that node a is connected to node c .

- Degree distribution: a degree in a network is the number of links incident on (or connected to) a node. A degree distribution ($p(k)$) is the probability that a vertex chosen at random has a degree K , or the probability distribution of these degrees over the whole network. Such a concept introduces the in-links and out-links structure that influences measures of centrality and prestige.

²⁷⁸ Reuven, Cohen, Keren, Erez, Ben-Avraham, Daniel, and Shlomo, Havlin. "Resilience of the Internet to Random Breakdowns." *Physics Review Letters*, Vol.85 No 21, 2000, 4626–4628.

- Resilience: the capacity of the network to resist the removal of central nodes. Networks vary in level of resilience. In case a node is removed, the length of the paths from one node to another increases; ultimately, if the network has little resilience, nodes will be disconnected and communication between nodes will become impossible, thus leading to the disappearance of the network itself. An example could be offered in relation to the Internet; despite its networked structure, its resilience can be challenged through techniques of disruption, alteration, or destruction of certain central nodes.

- Degree correlation: a way of understanding how degree-nodes link to each other. Do high degree nodes correlate with each other or do they try to link to weak degree nodes? Such questions usually lead to interesting analysis of the shapes of networks. Such property is strongly linked to the idea that nodes in networks tend to correlate in relation to their degrees or what has come to be known as 'community structure'.

- Community structure: it has been noticed that nodes link in relation to 'interests', or high degree nodes usually link to each other. Such distinction in relation to the high or low degree creates some divisions within the network, influencing the metrics of centrality and prestige of individual nodes within the network.²⁷⁹

These properties depend on the metrics of centrality and prestige, briefly introduced here. Centrality is used to determine how important a node is in the network. In general terms, an actor is considered central when it has high involvement in many relations, regardless of send/receive directionality, or volume of activity. The three most widely used centrality measures are degree, closeness, and betweenness.²⁸⁰

²⁷⁹ Newman, Mark E. J. "The structure and function of complex networks." [Online]. Available at: <<http://arxiv.org/pdf/cond-mat/0303516.pdf>>. Last accessed 21 March 2015.

²⁸⁰ Freeman, Linton C. "Centrality in Social Network I. Conceptual Clarification." *Social Networks*, Issue 1, 1978/1979, 215-239.

Centrality has a ‘ubiquitous’ meaning; in fact, there are many ways to attest and measure a node’s centrality. In general terms, an actor is central when it is linked and, conversely, links to other nodes within the network. However, a node can be central also when it has more power (i.e., main router or opinion leader) or when specific characteristics are examined. This leads to a high flexibility of what degree centrality really means and measures and opens the door to a very interesting analysis of the networked structure of women’s issues in the two countries.

The second element of SNA metrics is that of prestige. An actor is defined as prestigious when it is the object of extensive ties as a recipient, or it receives many links from other pages on the web (usually addressed as in-links). There are generally three different types of prestige between actors: degree prestige, proximity prestige, and rank prestige. Prestige takes into consideration the difference between sending and receiving links/relations. Both elements will be explained in greater detail in due course.

These two variables have been largely applied to many fields, from social relations to animal behaviour, and, recently, to the web. They respond to the necessity to understand and study networks in relation to their spatiality.²⁸¹

The listed features offer an overview of the main characteristics of networks; of course the list is much longer than the above listed points. Scholars and scientists agree that different types and properties of network “affect the metric and maps generated from them, as well as their interpretations.”²⁸²

²⁸¹ Barabási, Albert-László. *Linked—The New Science of Networks*. Cambridge, MA: Perseus Publishing, 2003.

²⁸² Hansen, Derek L., Shneiderman Ben and Smith, Marc A. *Analysing Social Media Networks with NodeXL: Insights from a Connected World*, 36.

4.4 Network analysis metrics and visualisation tools

The network visualisation²⁸³ tools employed for this research are based on SNA metrics; some of the tools I will present in this chapter rely on an automated analysis of the world wide web and social media and are based on hyperlinks. Some others instead are based on semantic analysis; as is the case of Infomous, used to map tweets and conversations. As will be extensively explained, relational networks on Web 2.0 platforms can be measured through hyperlink connections, either between individual nodes (i.e., a blog) or collective nodes (i.e., Facebook). However, semantic analysis of digital content is an important aspect of digital media analysis; I have employed Infomous, a software that allows the monitoring of Twitter conversations semantically, showing relevant results in a ‘topic cloud’ updated in real time. Sentiment analysis is an approach that is at its experimental stages and attempts to train algorithms to interpret online discussions. There are several tools I have explored, both open source and proprietary among which are Delta Sentiment and Twitsentiment; the dubious reliability of the results have led me to exclude them. I have however employed Infomous as the most reliable source of semantic monitoring of selected Twitter accounts, Twitter campaigns, and newsfeeds. To date, Infomous doesn’t allow the export or retrieval of data.²⁸⁴

Given these limitations, the digital layer has been investigated predominantly through hyperlink analysis, made possible by a combined use of MOZ SERP (MOZ Search Engine Research Pages),²⁸⁵ qualitative

²⁸³ By the term visualization I refer to the current ways of displaying data. I will mainly use Network visualization tools, indicating that the data gathered and analysed will be displayed in the shape of a network.

²⁸⁴ It must be also clarified that the company refuses to explain the ways in which its algorithms work. On the website, Infomous algorithm is addressed as “magic” but no further explanation is given. “How it Works” [Online]. <http://www.infomous.com/how_infomous_works>. Last accessed 12 March 2015.

²⁸⁵ MOZ has allowed me to gather inlinks and outlinks with regards to a specific URL or a specific search term (through Boolean search). I also investigated Google Blog Search Scraper and Issue

analysis of retrieved links, Issue Crawler, Gephi, and Facebook analysis tool Netvizz, presented below.

4.4.1 Issue Crawler

The Issue Crawler is a web network location and visualisation software based on hyperlink analysis and consists of crawlers.²⁸⁶ It is part of the rich plethora of tools developed by the Digital Methods Initiative, a European programme that has its headquarters in the Netherlands. Sites may be crawled and analysed in three ways: co-link, snowball, and inter-actor. Co-link analysis crawls seed URLs and retains the pages that receive at least two links from the seeds. Snowball analysis crawls sites and retains pages receiving at least one link from the seeds. Inter-actor analysis crawls the seed URLs and retains inter-linking between the seeds. The Issue Crawler visualises the results in circle, cluster, and geographical maps. Issue Crawler is not language sensitive and multiple languages can be used to map a network.

A list of URLs (the seeds) needs to be input in the so-called 'harvester' (Figure 8). The URLs can be general or as specific as the URL of a pdf document available or downloaded online. The aim of the 'harvester' is to start the process of crawling the web in search of online pages linked to the original seeds. Once the crawl is completed, the results can be visualised in a network map (Figure 9). When a network is located, individual actors may be profiled in a network graph that shows the inbound links and outbound links. Through Issue Crawler it is also possible to access the data

discovery along with other tools such as KHCoder, NodeXL, CartoDB, DMI-TCAT and Mondrian, which have not been used for this specific project.

²⁸⁶ A crawler is a software that visits Web sites and reads their pages and other information in order to create entries for a search engine index. Entire sites or specific pages can be selectively visited and indexed. Crawlers apparently gained the name because they crawl through a site a page at a time, following the links to other pages on the site until all pages have been read.

in its raw form and in several different formats. The tool is explicitly based on the main metrics and logics of SNA, and it relies on hyperlink analysis that helps map relations between nodes (including, centrality, prestige, and betweenness) and changes of the network over time.

Figure 8 Issue Crawler Harvester [www.issuecrawler.net]

Instructions of use | Scenarios of use | Français | 한국어 | FAQ | Allied tools

» Log Out

issuecrawler

the Lobby

Issue Crawler

Network Manager

Archive

Sunday, July 01, 2012

@588.73

Harvester

Type or paste text and URLs into the Harvester

The text will be stripped to create starting points for the Issue Crawler

Next step »
Fine tune and Launch Crawl

http://websiteURL.extention/other relevant docs

Harvest

Current and Queued Crawls

rss

13 Jun 2012 psico_snow

18 Jun 2012 6.17.12 ASC Tenants:
Snowball: Degrees 2: Crawl
Depth 3

1 Jul 2012 Navalny 2 with excludes

27 Jun 2012 Digital Media and Learning
Inter-actor

28 Jun 2012 Europe Right Wing InterActor

18 Jun 2012 FB_FS_18062012

18 Jun 2012 YT_FS_18062012

18 Jun 2012 FZ_FS_K_MP_FS_18062012

18 Jun 2012 Interned_BCG_google_bronnen

18 Jun 2012 FR_parties_1depth_after
elections

18 Jun 2012 gruene-blogs

18 Jun 2012 cdu-blogs

20 Jun 2012 Ogilvy

20 Jun 2012 Ogilvy II crawl depth 2

22 Jun 2012 ar1-2

22 Jun 2012 ar1-3

25 Jun 2012 Aging_Advocacy_2

26 Jun 2012 Drone crawl (droneswatch,
droneswatch)

Figure 9 Example of Issue Crawler Network



The weakness that Issue Crawler presented was twofold. Despite the availability of multiple link analysis, only the snowball and the inter-actor analysis were available in 2010, when this research started. Additionally, Issue Crawler does not distinguish between active and inactive links and between spam and useful links. An attentive content analysis of each node and URL filtering is therefore essential to test the validity of the results. Despite the fact that the recent enriched features -such as the link to Gephi (later discussed)- Facebook, and Twitter are considered nodes themselves, entrapping the richness of the activities on the two platforms into a 'black box'; it is also not possible to manually input data once the crawl or any other activity is completed despite the fact that it quite unusual to find a fully automated web crawl.

The strength of the tool, on the opposite side, is the easy visualisation of relations between URLs and the possibility to extrapolate raw data in many formats (xml, GEFX, and the number of in- and out-links), making the tools flexible and open to further refinement.

Given the limitations of this particular DMI tool and given the discussed limitation of any Web 2.0 analysis based by default on hyperlink analysis, the results gathered through Issue Crawler have been further refined through content analysis of the nodes and through the URL extrapolation, implemented with MOZ SERP.

4.4.2 MOZ SERP

MOZ SERP is a Search Engine Optimisation tool used in media PR. In its freely available version, it allows to extract URL related to a specific query. The results of a specific query can then be extracted in .csv or .xls format which includes the URL, a description of the URL (usually the title or the snippet), the page's authority (in relation to the links it receives), domain authority (which is a metric used in SEO to predict how well a website can perform on search engines²⁸⁷) and specific data on Root Domains.

At the time of this research, MOZ SERP works very well with Google; however, I used a customised version of Mozilla Firefox that has allowed me to also include results from other search engines.²⁸⁸

The advantages of using MOZ lies in the possibility to install a programme on the browser that helps the extraction and analysis of search results (Figure 10 and Figure 11). I used MOZ to extrapolate links from and to websites, blogs, documents, and groups and it proved particularly useful and insightful in my analysis of the Egyptian network of women's issues (discussed in the next chapter).

²⁸⁷ Moz uses proprietary metrics such as MOZ Rank and MOZ Trust. MOZ Blog. "What is domain authority?" [Online]. Available at: < <https://moz.com/learn/seo/domain-authority> >. Last accessed 8 July 2015.

²⁸⁸ I have specifically added: Yahoo!, Bing, Ixquick, DuckDuckGo, Wikipedia, Twitter, Facebook, Local and regional search engines (like Yamli), which are, however, powered by Google.

Figure 10 MOZ SERP Sidebar

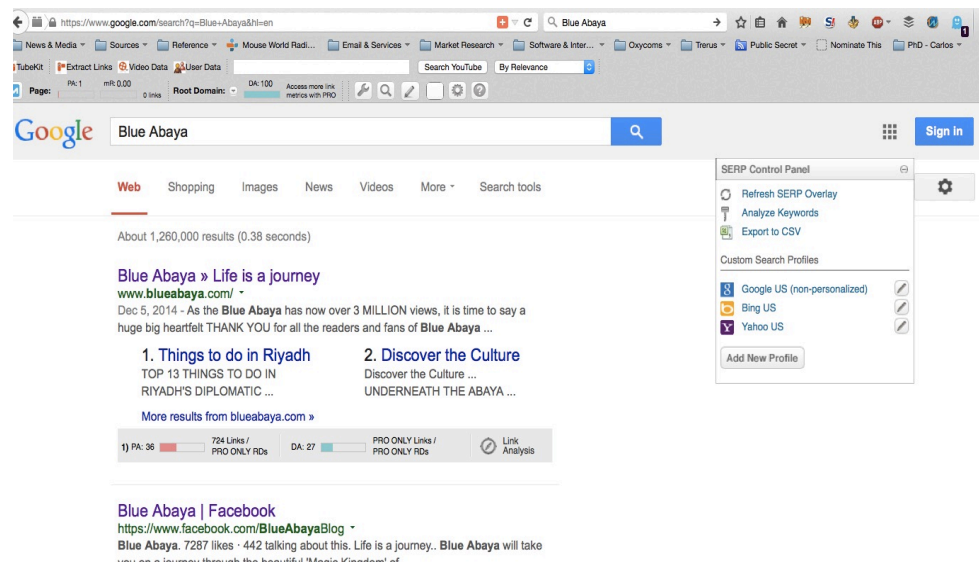


Figure 11 MOZ SERP .csv results

[illegible]

4.4.3 Gephi

Gephi is an open source software that adds to the long list of social network visualisation tools now available online. I chose to work with Gephi primarily because of its capacity to offer an in-depth analysis of a network. It also offers the possibility to work on some aspects manually, to group similar nodes, avoid duplications, and create ad hoc requests through advanced settings. Gephi has important features such as centrality, prestige, and communities, all of which have been previously introduced. The data set I have built through the combination of MOZ and Issue Crawler has been uploaded to Gephi in .csv format, to visualise the relations between different nodes and the network that such relations would compose. The concept of relation is very specific in Gephi; in order for nodes to be linked and networks to emerge, the uploaded raw data has to be in tree structure and, additionally, a 'relation' column must be added; Gephi only allows for two relations, 'directed' and 'undirected'. Networks can instead be of three different types: directed, undirected, and mixed. Additional information can be added; I chose to add language and issue. The full dataset can be opened and downloaded for further analysis on the website at: <http://www.oxycoms.com/clb/Tools.html>

4.5 Research Design

The previous chapters have highlighted the emergence of issues such as the veil, and education, but also touched upon the controversial topic of citizenship and civil rights. The chapters have also discussed the battles for empowerment fought by women through speeches, marches, and challenges to established governments, from the right to vote in Egypt to the driving ban in Saudi Arabia. These discussions have highlighted the multiplicity of

each of them as well as the multiplicity of actants involved in their emergence.

These issues have become part of an initial list of keywords (Tables 2 and 3—Arabic translation) that have been input in search engines such as Google and Yahoo and on the vertical blog search engine Technorati and the women's blog search engine Blogher. Through Boolean search I have started to look for relevant results, or forums and blogs that could discuss one or many of these issues. The list doesn't claim to be an exhaustive representation of the issues women deal with in Egypt or Saudi Arabia nor does it attempt to represent the topic of discussions happening on the web. Rather, it hypothesises that some of these issues might be discussed on the net or might have some presence on the net, along with other issues being discussed.

Table 2: *Initial List of keywords in English*

Egypt	Saudi Arabia
Civil rights	Freedom
Human Rights	Religion
Women Employment	Muslim Women
Education	Muslim women rights
Female Genital Mutilation/Cutting/infibulation	Veil
Divorce	Seclusion
Islam	Hijab
Shar'ia/Shari'a/ Sharia/Shariah	Burqa
Citizenship	Abaya/Abayah
Honour Killing/Honor Killing	Women Empowerment
Personal Status Law/Family Law	Domestic Violence
Employment	Feminist/Feminism
Labour	Gender Equality
Ahadith/Hadith	Forced Marriage/Arranged Marriage

Table 3: Initial list of keywords in Arabic

مصر	السعودية العربية المملكة
المدنية الحقوق	مسلمات
الإنسان حقوق	المسلمة المرأة حقوق
المرأة توظيف	ديات
الحرب ضد / سلام	دية
الاناث ختان	التعليم
الفرعونى الختان	اعتزال / فصل
طلاق	حجاب
الإسلام	البرقع / نقاب
إسلامية شريعة (Islamic Law) or الشريعة (shar'ia)	عباية (abaya / abayah - are all the same)
مرتب زواج	أحاديث
الشرف قتل (honour or honor killing)	الأسري العنف
النساء رج	النسوية
التعبيد حرية	الجنسين بين المساواة نظرية)'feminism' literal translation in Arabic = gender equality theory)
المرأة نشاط	الجنسين بين المساواة
المدبرة الزوجات	القسري الزواج
استقلال / حرية	

Through the use of Google Adwords it has been possible to funnel the search of keywords per country.²⁸⁹ It is worth noting that when the search first started, the search for Arabic keywords through Google SEO tools proved difficult to perform due to the then poor range of languages offered by Google as a company. Things have changed after 2010, at least for what concerns the present research.

Additionally, this search analysis enabled me to gather an initial selection of platforms and blogs such as MuslimahMediaWatch.com and Blogher.com, through which it was possible to go into a “discovery” of Saudi and Egyptian bloggers and further restrict the search to blogs about women’s issues. This search has been executed again, using the same keywords, in 2014, and the results appeared different, with the predominance of Wikipedia, Huffington Post, and Facebook. The results are most likely to be related to the Hummingbird algorithm that Google had launched earlier in 2014, although the algorithm is set to only target commercial websites.²⁹⁰

²⁸⁹ Google Adwords is used in media and PR to plan a search campaign. The tool is freely available although the layout and main features have significantly changed over the years. I used the tool to understand which keywords were more relevant in relation to specific geographical denominations. It is no longer possible to execute searches without creating an ad and get a full

²⁹⁰ Google Hummingbird is the natural evolution of Google Panda, launched in 2011 by Google and aimed at reducing the amount of spam generated through natural search (SEO). Although this is very much an issue for marketers and digital specialists, the Hummingbird algorithm has affected also non-commercial sites such as NGOs websites, static blogs, HTML sites and sites that do not undertake a continuous process of “refreshing” their pages or are not rich in images (which must necessarily carry a “floodlight” or a piece of code that allows their tracking). Hummingbird is in fact based on the principle that “static” sites are spam, thus the SERP is starting to privilege frequently updated sites, Social Networking Sites (due to their fractional updates) and blogs of certain dimensions (like the Huffington Post). Additionally, as of Feb 2014 Google has encrypted 80% of the traffic generated on the search engines and the results of such action are still to be understood both by marketers and academics although their effects have led to a peak of paid search. These changes need to also take into consideration the recent semantic updates of Google search, where Boolean seems to have changed dramatically to the point that it is thought that Hummingbird has replaced PageRank and Google has become “intelligent”. The results can be seen in the increased amount of paid search generated through google and in the new techniques of non-intrusive, semantic and tailored advertising (i.e. iSense).

Figure 12: *MuslimaMediaWatch (now Patheos.com)*



These initial steps led to the collection of a list of blogs, Twitter accounts, YouTube videos, forums, articles, and, relatively later, Facebook groups and pages and Twitter hashtags. All these objects have been saved in an excel document, that can be found and downloaded –as already pointed out- on the website at <http://www.oxycoms.com/clb/Tools.html>.

Doing research online raises questions with regard to the reliability of information and the relevance of network analysis through hyperlinks. In order to address such concerns—as I will in the chapters that follow and in the conclusions—it is important to discuss elements critical to the overall research, such as the role of search engines in the context of hyperlinks analysis.

4.6 Analysis of methodological issues critical to the research

The distributed structure of the Internet and the world wide web—previously introduced—is based on hyperlinks, which take the shape of page links, relations, friendships, and followers/followed structure depending on the platform. These elements, it could be argued, make up the networked structure of an otherwise chaotic depository of information. This practice of ordering an otherwise chaotic repository of posts and pictures influences and ranks the ways users experience the platform itself; it also shows the immediacy and fleeting nature of how discussions appear and disappear, gaining temporary yet easily accessible and fully documented centrality.

4.6.1 Hub-periphery structure and the role of search engines

Search engines occupy a crucial position in the organisation and consumption of online content. They organise information in a bottleneck structure, crawling and monitoring the world wide web, retrieving and ranking relevant information. Content retrieved following a query is varied and spans from website pages to documents in different formats, and social networking sites. The query is key to retrieve information and the so-called ‘snippet’ (the two-line description that search engines offer after the ‘title’, Figure 13) is fundamental to understand the relevance of the results. These results appear in the SERP or the Search Engine Result Page.

Figure 13: *Search Engine result (Title, Landing Page and Snippet)*



How to Track a Cell Phone | Digital Trends
www.digitaltrends.com › Mobile ▾
Oct 31, 2014 - Need to keep tabs on the location of a cell **phone** or smartphone of any kind? Consult this ... **Find your phone** with these helpful tracking tips.

Google and other major search engines work with the PageRank algorithm, usually seen as the natural “heir” of HITS algorithm, previously introduced. PageRank is a Google Trademark and has bettered certain limitations that HITS presented.²⁹¹

Like HITS, the PageRank algorithm is based on the assumption that the number of hyperlinks determines the centrality and the authority of a specific website or online node of any nature.²⁹² It therefore assigns a numerical weight to every hyperlinked document available on the net. The aim is to measure the importance of a set of nodes through the count of inbound links each document (or page) receives. In a very simplistic language, that means that the page that receives the highest rate of inbound links will be assigned the highest weight and will therefore show in the top results of any query executed on the search engine.

Unlike HITS, PageRank is not query sensitive and has been adopted by many other search engines. Where HITS makes the distinction between hubs and authorities, PageRank “considers the hyperlink weight normalization and the equilibrium distribution of random surfers as the citation score.”²⁹³ Additionally, whereas in HITS a webpage that receives a higher number of outbound links is automatically considered more authoritative in the final ranking, in PageRank each outgoing hyperlink is weighted, meaning that every webpage has potentially the same opportunity to be found, independently of its size (here intended as number of inbound and outbound links). A useful example could be that of a website

²⁹¹ PageRank has been patented to Stanford University under the US Patent number 6,285,999.

²⁹² Between 2010 and 2013 Google has launched three new algorithms, Panda, Penguin and Hummingbird, whose functioning seems to be of difficult understanding and whose rules can affect SERP results (thus harming businesses’ ROI, which is a fundamental metric because it decides the level of adspend or the investment towards marketing activities –especially digital).

²⁹³ Dingy, Chris, Hey, Xiaofeng, Hongyuan Zhaz, Husbandsy, Parry and Simon, Horst “PageRank, HITS and a Unified Framework for Link Analysis.” [Online]. Available at <www.siam.org/proceedings/datamining/2003/dm03_24DingC.pdf> . Last accessed 17 July 2012,

that receives many outbound and inbound links, such as BBC.com, and a small, niche site which could either be a blog or a html site. Following the weighted algorithm as in PageRank, it could be argued that both sites will have potentially the same probability to be at the top of the SERP page. It follows that PageRank could potentially bring some Internet democracy; each website in fact should receive a total of one vote having, in theory, the same relevance on the final ranking; notwithstanding the algorithmic explanation, studies have demonstrated the opposite, bringing back traditional concepts like agenda setting or coining terms, such as *googlearchy*.²⁹⁴

The term indicates an inner structure of the search engine itself, justified also by the extensive optimisation offered by the company when a certain amount of paid search is trafficked through the site. At the same time, Google has become one of the most effective media, although it doesn't simply fall under the category of a digital medium. The political relevance of search engines as determinant actors in the organisation of knowledge and information sits in their purely algorithmic ability to give space to agenda-setting processes and hierarchy of information and knowledge where small players can pay rather high costs.²⁹⁵

On these regards, Konrad Becker and Felix Stadler focus on the capacity of search engines to organise information acting as agenda setters, following the logics of the market and, as such, the information they provide

²⁹⁴ Introna, Lucas D. and Nissenbaum, Ien. "Shaping the Web: Why the politics of search engines matters." *The Information Society: An International Journal* Vol.16, Issue 3, 2000, 169-185;

Hindman, Matthew, Tsioutsoulis Kostas and Johnson, Judy A. "'Googlearchy': How a Few Heavily-Linked Sites Dominate Politics." Paper presented at the Annual Meeting of the Midwest Political Science Association, Chicago: IL, 31 March 2003. [Online]. Available at: <<http://www.cs.princeton.edu/~kt/mpsa03.pdf>>. Last accessed 12 December 2014.

²⁹⁵ Hindman, Matthew, Tsioutsoulis Kostas and Johnson, Judy A. "'Googlearchy': How a Few Heavily-Linked Sites Dominate Politics", 1.

is not neutral.²⁹⁶ The already introduced structure of the web as proposed by Albert and Barabasi doesn't allow Google or any search engines to be a neutral or 'democratizing' force. In fact, the hubs-periphery structure of the web is reflected in the search; as Barabasi noted, some nodes receive more links than others, and this is the logic behind the functioning of any search engines: nodes that receive the highest number of links (inbound or inbound links) are automatically calculated as being more relevant and therefore are given prominence in the search results.²⁹⁷

4.7 Conclusions

The discussion articulated so far has touched upon the overall research structure and the ways in which the analysis of the layers discussed in previous chapters has been translated into an initial list of issues and, consequently, a database that has been uploaded and visualised through various social network visualisation tools. I have specifically addressed Social Network Analysis and its metrics that, I argue, constitute the basis of the visualisation tools I have employed in my analysis of women's issues in Egypt and Saudi Arabia as merging on the digital layer. Throughout the chapter I have discussed the challenging situation that a digital analysis involves, especially in light of two important aspects, the hyperlink logic of automated tools and, equally relevant, the changes that search engines are undergoing following algorithmic alterations. With regard to hyperlink Michele Jackson has maintained that hyperlinks are the "mechanism through which information can be passed across otherwise

²⁹⁶ Becker, Konrad and Stadler, Felix (eds). *Deep Search. The Politics of search beyond Google*. Studienverlag ges. m.g.H., Distributed by Transaction Publishers, New Jersey 2009, 7-12.

²⁹⁷ Given these premises, it could be also argued that search engines undergo political pressure/influence and government interference. These issues are a tangible reality in many countries, as it is the case of Saudi Arabia and, to some extent, Egypt before the 2011 uprising and subsequent collapse of the Mubarak's regime.

incompatible systems, platforms and networks.”²⁹⁸ Mike Thelwall highlighted how links are the “essence” of the web; the hyperlink is the “mechanism through which information can be passed across otherwise incompatible systems, platforms, and networks”.²⁹⁹ However, Thelwall also discusses how hyperlinks can be construed also as intrinsically political in which they can confer authority or endorsement, reflect trust, or can be used to create a “negative affect relation”; as a consequence, Thelwall continues, an accurate analysis of the logic of hyperlinks cannot be neglected.³⁰⁰ The profound changes that algorithms like PageRank have undergone confirm the critical importance to avoid assumptions of net neutrality.³⁰¹

On a more methodological level, the challenges that hyperlink analysis presents are twofold. Firstly, the hub and periphery structure of the Internet and the world wide web is reflected (or replicated) in the hyperlink algorithm of search engines. The very existence of a SERP (Search Engine Result Page), but also the introduction of new and more business-oriented algorithms and paid opportunities to increase SERP performances, indicates how hyperlinks can also be ‘manipulated’ by nodes with more power than others. Although theoretically each node is ranked in relation to the number of clicks received by the users, it would be hard to talk about Internet democratization.

Secondly, although hyperlink analysis is well suited for social network analysis, questions arise especially in relation to the so-called 0 degree nodes and the loop nodes. The 0-degree are nodes that are present

²⁹⁸ Jackson, Michele H. “Assessing the Structure of Communication on the World Wide Web.” *Journal of Mediated Communication*, Vol. 3 Issue 1, 1997. [Online]. Available at: < http://jcmc.indiana.edu/vol3/issue1/jackson.html#Meth_Prob_I>. Last accessed 17 Jul. 2012.

²⁹⁹ Thelwall, Mike “What is this link doing here?”. In *Information Research*, Vol.8 Issue 3, April 2003. Available at < <http://informationr.net/ir/8-3/paper151.html> >, Last accessed 17 July 2014.

³⁰¹ Jackson, Michele H. “Assessing the Structure of Communication on the World Wide Web” .

in the network but do not receive any link from other nodes. This doesn't necessarily mean that they do not belong to the network but, simply, that their *raison d'être* is not in their being bounded to other nodes. The 0 degree nodes have been identified in many networks, and they are also counted as nodes part of the network in Network Theory. However, an analysis of online social networks would ignore the 0 degree so the picture of the network could be potentially partial.

In the course of the research, it has been possible to interview a few bloggers,³⁰² and the main element that has come out is the presence of Arabic forums used as a source of information and inspiration for bloggers that write their blogs in English; the posts never link to such forums so, in theory, such forums are crucial for the network but are 'inexistent' because there is no link to them.

The spread of mobile applications like Path or Telegram are equally relevant. In May 2014 Saudiwomanblog posted an article about how activists have "hibernated," hinting at the new forms of digital discussions that travel through mobile phone applications, specifically Telegram, a P2P encrypted, multi-platform, geographically dispersed and cloud based application still difficult to trace. Although a comprehensive map of all issues across all digital media would be wishful thinking, the '0 degree' nodes' epistemological and ontological contribution to an analysis of women's issues (or any issues) cannot be ignored.

In the chapters that will follow I will delve into the results of the analysis of women's issues on the digital layer and the reflections that originate from it.

³⁰² Length of these interviews varied from a single email exchange to correspondence that lasted several weeks or months. However, because of the interviewees concerns stemming from privacy and anonymity, they were no longer used in this research.

Chapter 5: Technowomen and issue-oriented investigation of women's issues

5.1 Introduction

The previous chapters have drawn attention to the complexity of an analysis of women's issues in Egypt and Saudi Arabia; the multiple, and apparently contradictory, interplay of actants that contribute to the emergence and co-creation of such issues have been discussed and presented. These chapters have sought to show how a multi-layered and networked map of certain women's issues can be used as a useful theoretical approach, whose purpose is twofold; on one hand the complexity that this thesis aims at is best reached through the multi-layered and networked map; on the other, the chapters on the emergence of women's issues in the localities of the two countries have shown how the map is ultimately a process and a mode of investigation. It is in the issues' movement between fields of analysis and layers, and their perpetual becoming something new and different that the concept of the map has found space.

The introductory chapters have been a gateway to an analysis of the digital layer, contributing to answer a question with regards to what is an issue to women in Egypt and Saudi Arabia and how certain issues have emerged and gained centrality, appeared and disappeared, expended and emerged through many different layers. This chapter will present the results of the analysis of the digital layer and the ways in which the issues that emerged in previous chapters have been used to start my online search for what issues emerged, and how the digital layer has expanded an understanding of women's issues altogether. The concept of technowomen, already introduced, will find space and will be further explained through

case studies and observations. It will be argued that the apparent ephemerality of the term, its existence on and through the digital layer, doesn't make technowomen independent from other layers and actants as part of the map. On the contrary, this chapter will discuss the phases of the research, changes it undertook, and ways in which technowomen have become nodes and networks simultaneously, digital in nature but profoundly rooted in the terrain of those issues so far discussed.

The first part of the chapter will show how the initial list of keywords input in search engines helped identify an initial list of digital artifacts comprising blogs, websites, and articles that had the potential to carry content related to the issue list, identified and translated into Arabic and English keywords. I will discuss the impasses that have altered the ways I was mapping the digital layer and moved to an issue-centred and, most importantly, an 'object-oriented'³⁰³ mode of investigation. As I will explain in due course, if the initial goal had been one of finding lists of websites, blogs, forums as well as Facebook pages and Twitter accounts and to analyse the existence of a network and the various degrees of engagement,³⁰⁴ I soon realised how single images, videos, and documents' URLs (in various formats) contributed to the existence of a network of and

³⁰³ The term object in this thesis refers to digital and computed objects in the forms of images, pictures as well as links found online but whose significance in the establishment of a network of relations and in the network's topological nature must be attended to.

³⁰⁴ The methodological choice to select specific URLs (mainly blogs and forums as well as Facebook pages or twitter #) has been put forward by The Berkman Research Center For Internet and Society with the 2009 report on the Arabic blogosphere and has, since then, been followed by –for example– The Digital Methods Initiative and other European research projects involved in the mapping of blog and forums. The peculiarity of such methodologies lies in the necessary choice to select and investigate specific URLs (usually bloggers rather than posts, Facebook pages or Twitter # rather than specific posts or images) and analyse the network. However, the problems I had identifying an Egyptian Network of women's issues and the important role placed on the existence of pictures and videos has made me rethink this aspect. Examples of the above mentioned works can be found in Etling, Bruce, Faris Rob, Palfrey, John and Kelly, John "Mapping the Arabic Blogosphere: Politics, Culture and Dissent." *Berkman Center Research Publication*, No 6, 2009. [Online]. Available at: < http://cyber.law.harvard.edu/publications/2009/Mapping_the_Arabic_Blogosphere>. Last accessed 2 February 2015.

to the network's topological distribution. This aspect further enriched the idea of a multi-layered and networked map; in fact, women's issues and technowomen were not only considered as emerging through and on a pre-existing set of websites, blogs, Facebook pages, or Twitter conversations but also on and through digital objects.

As a result, the second part of the chapter will focus on a reflection of these impasses through the results. I will also reflect on the temporary dimension of fractional updates that translate in comments, posts, tweets, hashtags on platforms like Facebook and Twitter, and the ways in which a multi-layered and networked map adds a new dimension. The inadequate response of current visualisation tools and analytical software will also be discussed in this second part of the chapter.

This second part of the chapter will first and foremost present the results of my digital analysis through the visualisation tool Gephi. I will explain in detail the results through the SNA such as centrality, prestige, and communities. I will mainly reflect on the ways in which I could visualise the women's issues network through Gephi and the pitfalls of current tools to search hyperlinks, collect URLs, and build networks. However, it is necessary to clarify that although these pitfalls have significantly altered my ways of researching the network of women's issues in Egypt and Saudi Arabia, they have also offered original cause for reflection on technowomen, mediation of space through software, and the temporary dimension of certain issues through software updates; the latter will be only touched upon in this chapter through the cases of two Twitter hashtags but will not receive further attention.

It ought to be clarified that such pitfalls have also challenged my intention to map a complex and cross-platform network of women's issues in the two countries. In fact, despite my initial goal to gather cross-platform data and visualise it through Gephi, the task proved difficult. I have therefore analysed Facebook and Twitter (being the most used and

traceable platforms in both countries)- separately; in addition to this, for reasons of time, space, and resources I had to select specific Facebook pages and groups and specific Twitter hashtags (or conversations between Twitter users that carry a specific tag). Specifically, I will talk about Netvizz, used to trace the network of Facebook pages, and the ways in which it has been the most satisfactory tool of analysis of Facebook relations. As for Twitter, I will briefly introduce Twitonomy, a proprietary tool used to track and follow Twitter accounts and hashtags (#). Finally, I will discuss the challenges that a Twitter analysis entails. I will do so comparing the #MeshSakta campaign launched by Cairo-based organisation Harassmap and the #Women2Drive campaign launched in 2011 in Saudi Arabia.

5.2 Stage one: Data aggregation and issue-oriented dataset

In the previous chapter I discuss the ways in which the selected literature presented in chapters two and three were used as a reference point for the online analysis. The issues became, in fact, English keywords I translated into Arabic (showed in Tables 3 and 4). This initial list of keywords was input on Google and Yahoo using Boolean search. This step helped identify an initial list of URLs from which I started the analysis of the digital layer (Tables 5 and 6).

Table 4: *Egypt_initial list of URLs*

Websites

<http://ecwronline.org>
<http://www.linktv.org/programs/shayfeen>
<http://www.shayfeen.com/>
<http://www.ihollaback.org/>
<http://www.yafn.org/>
<http://www.alnadeem.org/>
<http://www.nawalsaadawi.net/>

Blogs

<http://www.manalaa.net/alaa>
<http://laila-eg.blogspot.com>
<http://www.manalaa.net/english>
<http://sheermentalgarbage.blogspot.com/>
<http://blog.harassmap.org/>
<http://www.radsch.info/>
<http://www.sandmonkey.org/>
<http://woundedgirlfromcairo.blogspot.ch/>
<http://3anes.blogspot.com/>
<http://justurhead.blogspot.com/>
<http://daliahm.blogspot.com/>
<http://notgr33ndata.blogspot.com/>
<http://nerro.wordpress.com/>
<http://misrdigital.blogspot.com/>
<http://emraamethlya.blogspot.com/>
<http://ekbalbaraka.blogspot.com/>
<http://daliaziada.blogspot.com/>
<http://blog.goethe.de/transit/>
<http://justurhead.blogspot.com/>
<http://diaryofarebel.blogspot.com/>
<http://bent-we-walad.blogspot.com/>
<http://weekite.blogspot.ch/>
<http://echoingscreams.blogspot.com/>
<http://rwac-egypt.blogspot.it/>
<http://egyptianchronicles.blogspot.it/>

Table 5: *Saudi Arabia_initial list of URLs*

<http://alternativesaudiivoices.wordpress.com/>
<http://americanbedu.com/contact-american-bedu/>
<http://hala1.wordpress.com/>
<http://mahanoor.wordpress.com/>
<http://motahry.blogspot.com/>
<http://sandgetsinmyeyes.blogspot.com/>
<http://saudialchemist.org/>
<http://saudidivorce.org/suite/>
<http://saudiwoman.wordpress.com/>

<http://susieofarabia.blogspot.com>
<http://www.nimahnewwab.com/>
<http://www.saaaid.net/female/0194.htm>
<http://www.sawomenvoice.com/>
<http://www.wafa.com.sa/>
<http://www.wluml.org/node/6335>
<http://www.womensenews.org/story/commentary/040407/womens-rights-will-benefit-all-saudis>
<http://qusaytoday.com>
<http://saudiwomendriving.blogspot.it/>

Links related to women in Saudi Arabia

<http://arabnews.com/saudiarabia/article27224.ece>
<http://muslimahmediawatch.org/2010/05/the-tyranny-of-sex-in-the-saudi-novel/>
http://news.bbc.co.uk/1/hi/world/middle_east/1136837.stm
http://news.bbc.co.uk/1/hi/world/middle_east/3667349.stm
<http://omaimanajjar.wordpress.com/2010/12/27/omaima-al-najjar-being-investigated-by-the-religious-police/>
<http://www.alarabiya.net/views/2011/06/29/155280.html>
<http://www.channel4.com/programmes/dispatches/4od#2933745>
http://www.globaleye.org.uk/secondary_spring03/eyeon/women.html
<http://www.hrw.org/en/news/2009/07/08/saudi-arabia-women-s-rights-promises-broken>

The list was compiled through the combined search of Technorati, Blogger (now disappeared), Bloggingwomen, Google Groups, Google Forums, Google Blogs, and Yahoo. For the search engine research I used a modified version of Mozilla Firefox to hide the location tracking and render queries and searches geographically neutral. Although it is not the place, it is interesting to notice that some of the platforms above mentioned have changed their scope, lost their relevance, or have disappeared altogether.³⁰⁵

As the lists for Saudi Arabia and Egypt show, the discovery of blogs and forums quickly moved to a rather long list of links to videos, articles, and random posts related to the input keywords through Boolean search. The search for blogs and forums turned then into something more complex,

³⁰⁵ It is also worth noting that Boolean search techniques have themselves changed and almost disappeared through the new Google algorithms. I have also found that redoing the same search in 2014 gives me different –and at times uninteresting– results.

an archive or database where different objects (here intended as digital artifacts such as posts, articles, reports in pdf, videos, embedded documents, but also re-posted posts) found space and place. Such diversity has led me to reflect on this aspect; the Boolean search—especially on search engines—proved useful to think in terms of an issue-centred and an object-focused dataset. In fact, as previously introduced, if the initial list I compiled was mainly looking for blogs and forums and only sporadically considered specific pages or links to pdf documents, the ‘discovery’ of scattered traces of issues with regard to women in the two countries in the form of images, videos, articles, as well as various types of reports (pdf as well as word documents) became a precious source of information and knowledge.

These initial results were firstly input in IssueCrawler. I created two runs, one for Egypt and one for Saudi Arabia. It ought to be clarified that at this stage, the traditional SNA metrics of centrality and prestige were embraced. This peculiarity will be later explained through the case studies I will present and discuss. Issue Crawler helps crawl the web in search of hyperlinks; it is essential to enter a list of URLs for the ‘run’ to be launched. I entered the entire list for Egypt and, likewise, I input the complete list of links for Saudi Arabia.

The results were however different for the two countries. Although Saudi Arabia showed an interesting, though small, network of blogs and forums, there seemed to be no network for Egypt (“No Network”); despite the various runs, the results kept showing an absent network. This clashed with the list and, most importantly, at this stage of the research I had already become involved with some initiatives and entered in contact with bloggers and activists in the country. Therefore, I started a content analysis of each blog present on the list. Contrary to Saudi Arabia, Egypt came to represent an interesting and peculiar case study for two main reasons;

firstly the structure of online pages³⁰⁶ and, secondly, the 'depth' of the Egyptian blogosphere.

These two elements challenged the relevance of recurring to a fully automated search of nodes and links through web crawlers. Current social media analysis is in fact based on pieces of software, called web crawlers, that harvest the web in search of inlinks and outlinks between pages. The lack of a network in the case of the Egyptian list of URLs corroborates what Axel Bruns maintained, or that there is still no automated crawler able to undertake a complete analysis of a page and, most importantly, extrapolate embedded content (i.e., videos).³⁰⁷ This is especially true when applied to the analysis I undertook of the Egyptian blogs, which were the places where I first looked for information and connections.

In terms of the structure of online pages of Egyptian blogs, the data gathered from hyperlinks showed that not all bloggers link to other blogs or relevant pages. Most of the time, they are indirectly connected through videos or through a specific topic of interest (hence an issue); it also has been noticed that comments on each other's post are not too common and, in the specificity of my research, quite rarely bloggers link directly to each other –exception made for sandmonkey and egyptianchronicles (Figure 14 shows some examples). Rather, the majority of blogs contain links to the blog author's Facebook page, Twitter account or participation in projects and initiatives (i.e. Global Voices online, MuslimahMediaWatch). This initial 'sloppy' image formed around the blogosphere of women and men discussing topics relevant to the research turned into an insightful and unconventional contribution to the multi-layered and networked map.

³⁰⁶ With page this research refers to the page of a blog and any Internet page, hence including several pages within the same website. In fact, each page has a specific URL and URLs and links were what this research has analyzed for the last four years.

³⁰⁷ Bruns, Axel. "First steps into mapping the Australian Blogosphere." *Mapping Online Publics Lab*, [Online]. Available at <<http://mappingonlinepublics.net/2010/09/20/first-steps-in-mapping-the-australian-blogsphere/>>. Last accessed 17 April 2013.

Figure 14: *Example of two Egyptian Bloggers' pages*

2013/11

Expose Egyptian

their country for fear of prosecution, leave their countries due to political, racial persecution. Depending on the country as obstacles; those could be legal barriers, difficult to find a job in the new country, or cultural factors such as difference in language,

the most commonly used word for what's war. Syrians have been fleeing the war. And while some countries set up camps and Turkey, Syrian refugees in Egypt are scattered in even rural areas.

ing Syrian refugees, Egypt is host to a large number of Somali, Eritrean refugees plus

presence has shown as much Egyptian as deeply held racism against migrants. Here are many examples that support my

There has been essentially different. Numerous aid groups have stepped in to assist Syrians whether with medical services. These range from nation-wide organizations' syndicate to small locality-based groups. In contrast, refugee of African origins are not in the number of aid groups, mostly targeting those who are not. At those groups assist Syrians as well, it is extremely difficult to access services for Africans.

The informal aid system of African refugees limits their integration into Egyptian society, Syrians find it relatively easy to access medical providers alongside other Egyptians, and their integration into the community. This is also due to the presence of African refugees in Cairo (mostly in informal services), while Syrians are more spread in

About Me



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[Religion](#) [AIDS](#) [HIV](#) [Health](#) [Homophobia](#)
[Sex Ed](#) [Social Change](#) [Christianity](#)
[Homosexuality](#)

Blog Archive

- ▼ 2013 (1)
 - ▼ March (1)
 - Syrian Refugees Expose Egyptian Racism!
- 2012 (8)
- 2011 (16)
- 2010 (5)

Another important characteristic is the presence of embedded links in posts. These started a “multi-level” analysis and collection of hyperlinks, issues, and actants. Following one embedded link in fact led to a continuous discovery of new objects, new blogs, new bloggers, and moved the analysis from an attempt to collect blogs and bloggers to a database of digital objects related to each other directly and indirectly. Such a relation can best be rendered through the idea of a molecule, which has the characteristics of appearing cohesive but, at closer look and further analysis, reveals complexities and associations, and whose components are crucial in its composition. In the case of the Egyptian women’s issues network, this molecular characteristic showed the depth of a multi-object network made of videos as well as posts whose main cohesion and cohesiveness doesn’t lie in their hyperlinks but in the relevance of the issue discussed.

As already clarified, Issue Crawler proved very fruitful for an analysis of the URLs found for Saudi Arabia. The graphs I could pull out through Issue Crawler show a Saudi local network made of a handful of nodes, nineteen in the first run and eighteen in the second run (Figure 15 and Figure 16). In both cases I could identify the central node as the blog saudijehans.org, whose author is a young Saudi man, highly critical of the Kingdom, who writes in Arabic and English (despite the fact that his presence has become sporadic since 2012). Following in order of importance are: saudiwomanblog.com, saudirevelations.com, susieofarabia.com, and the very well-known blog muslimahmediawatch.com exclusively dedicated to Muslim women’s media representation. These nodes were considered central in relation to their in-links and out-links.

As it can be seen in Figures 15 and 16, the graphs Issue Crawler produces are bi-dimensional and give a spatial idea of the position of the nodes within the network. At first sight, it could be argued that the Saudi network was made of very loosely related blogs, that are distant in terms of

vicinity, however oxymoronic that might sound. At these early stages of the research there was very little possibility to highlight measures of prestige, especially due to the tool's lack of sufficient and detailed SNA metrics (discussed in a previous chapter) of prestige, centrality, and degree. As it can be noticed, there was a total absence of Facebook and Twitter. This absence is due to two main problems, one lies on the technical side and the other lies on the side of social media usage between 2010 and 2012 in Saudi Arabia.

On the technical side, it can be said that Issue Crawler used to have a default setting that would omit Facebook and Twitter-related URLs. Although the tool gave the possibility to manually override these settings, the results were nevertheless difficult to decipher. In fact, Facebook or Twitter would constitute a unique and unified node, therefore distorting the results and the veracity of the overall network. On the level of mediascape instead, it could be argued that the Kingdom experienced a boom in Facebook and Twitter between 2011 and 2012. In some cases, this research has found out that even the most active bloggers started to diminish their blogging activities, increasingly entrusting their thoughts and opinions to Facebook and Twitter. This aspect will be discussed in the next chapter where I will analyse Facebook and Twitter; it suffices to say that the instantaneity that characterises tweets and posts and the spread usage of hashtags across several social networking sites and platforms have led me to consider Facebook and Twitter separately and focus instead on a total of 2 Twitter hashtags per country and 5 pages and groups on Facebook per country, all selected on the basis of the most influential issues (number of mentions) and most prominent pages and groups (number of likes or frequency of activity).

Figure 15: *Issue Crawler, Saudi Arabia Network Run, 2010*

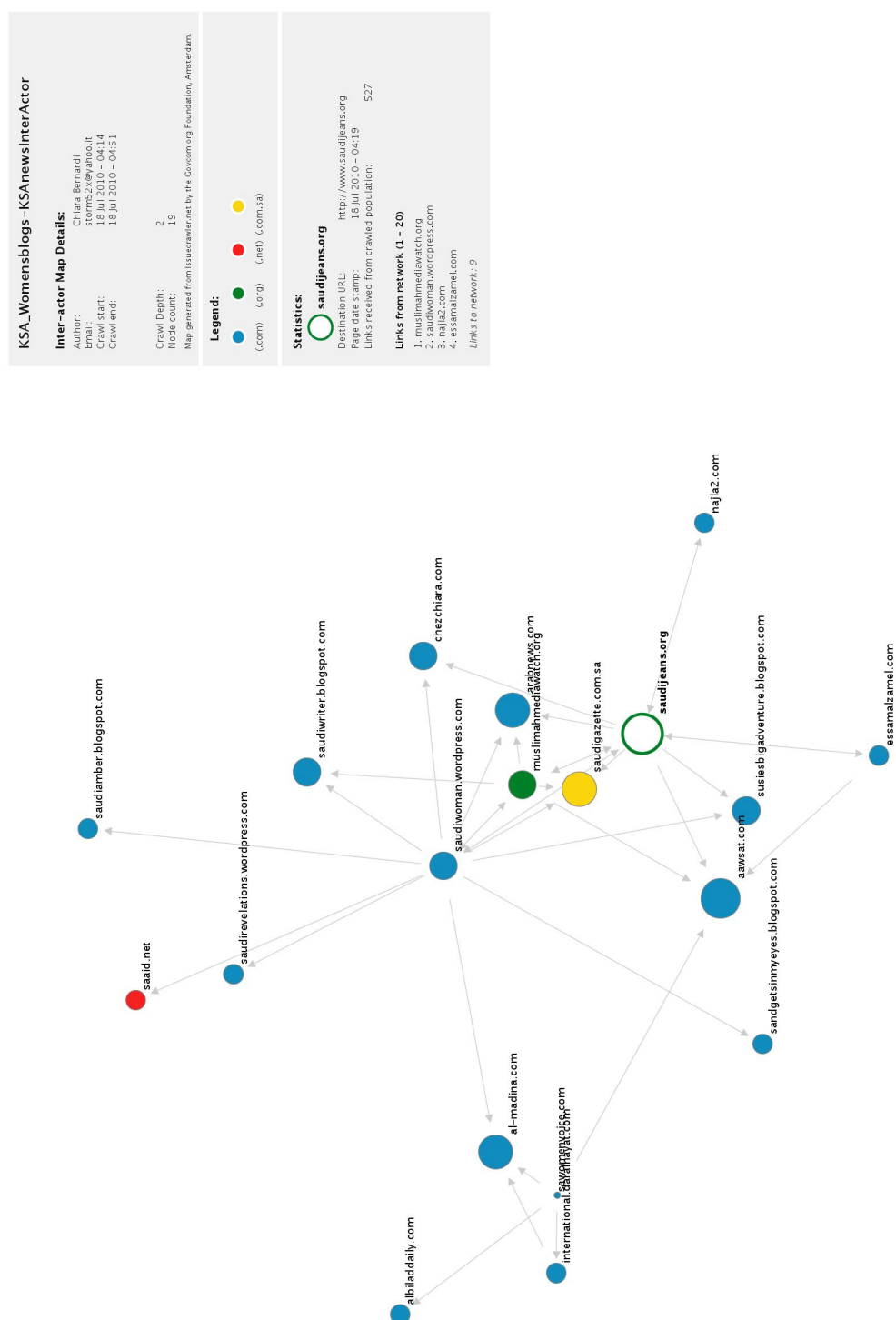
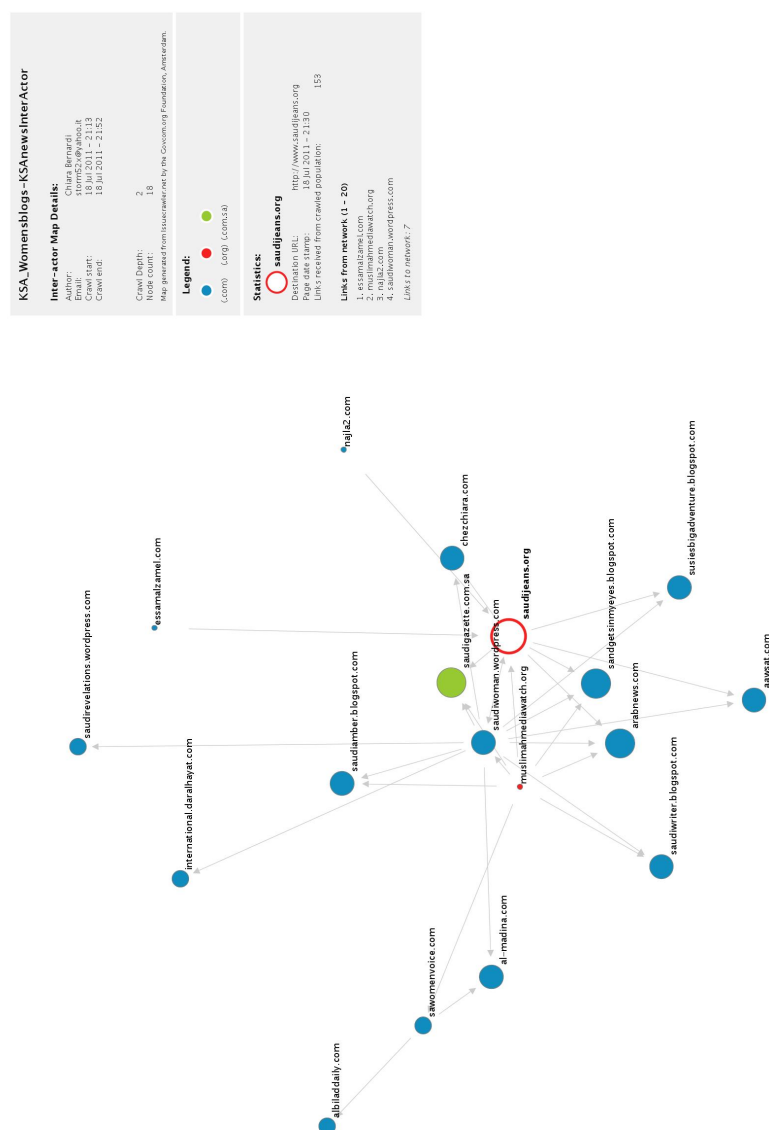


Figure 16 Issue Crawler, Saudi Arabia Network Run, 2011



5.3 Second stage of the research: Issue network through Gephi

The impossibility to use Issue Crawler as an aid in the discovery of women's issues as emerging on the digital layer led to the second phase of the research, which reflected on the practical contribution of an object-oriented mode of investigation. At this stage of the research, I used a combination of content analysis of the URLs on the list, MOZ SERP, "Inspect Element" function (available by right clicking the mouse on a specific page),³⁰⁸ and manual collection of all links within each URL. Where embedded, I added links manually on a separate Excel sheet.

This operation brought me to discover a network made of indirect links and separate 'levels' of hyperlinking activities. In fact, at this stage the main preoccupation was to understand what sort of network women's issues constituted and which issues (or blogger or entity within the network) were central. As a consequence, the collection of URLs took priority. This led me to read articles and blog posts and click on each and every one of them, collecting at the same time the hyperlinks. The operation led to a multi-level dataset (Figure 17) that contained diverse information, amongst which a "Comment" column to record any peculiarities I might find and discover.

³⁰⁸ YouTube and Twitter can be difficult to inspect in terms of source code. It is however possible to extract comments and tweets manually through the "GET" function in the "node" section of the Resource property section.

Figure 17: Multi-level dataset

Lev. 0 Source URL	Level 1- Posts links	Level 2- Links within posts and within blog	Level 3- Relevant links inside the post	Level 4_ other relevant links
http://www.sandmonkey.org/	http://forsoothsayer.blogspot.it/ http://shadow.manalaa.net/ http://analysis.blogspot.it/ http://www.cato.org/ http://tomgpalmer.com/ http://fallenessence.blog	http://renderingsofme.blogspot.it/ http://diasporicdiscontents.blogspot.it/ http://heliouta.blogspot.it/ http://www.sandmonkey.org/ http://forsoothsayer.blogspot.it/ http://alluringme.blogspot.it/search?updated-max=2011-12-17T11:11:00-08:00&max-results=1 http://diasporicdiscontents.blogspot.it/ http://ghawayesh.blogspot	http://q8-borgy.blogspot.it/ http://thegabi-nekabs.blogspot.com/ http://nakneef.blogspot.it/ http://aywakhadama.blogspot.it/ http://tahyyes2.blogspot.com/	http://mademoiselle-hh.blogspot.it/ http://classiclit.about.com/library/bl-etexts/kchopin/bl-kchop-anegypt.htm http://www.genpets.com/index.php http://www.andfaraway.net/ http://ramblinghal.blogspot.com/ http://maxxedout.blogspot.it/ ascendotium.wordpress.com http://www.oscholars.com/ http://www.bookslut.com/ http://www.muslimwakeup.com/

However, this initial structure couldn't be put to any use; it has therefore been necessary to adapt this initial version of the database into a relational one that could be read by Gephi.³⁰⁹ As a consequence, the data was transcribed into a Gephi-readable dataset where the levels would be maintained but the tree-structure would leave space to a two-columned document, to which I added "Tab ID," "Relation," "Issue," "Type," and "Language" columns to enable a more complex Gephi analysis (Figure 18). In total, I analysed 1,510 digital objects for the Egyptian Network and 794 for Saudi Arabia. Before inputting the database on Gephi to visualise the complex and variegated layout of the network these two countries could offer, I summarised the results in a Pivot Table. Amongst the many issues discussed about Egyptian women's issues the one that emerged in particular was that of sexual harassment (whose relevance increased in 2011); in Saudi Arabia, instead, the driving ban emerged as central to women debates (graphs can be visualised in Figure 19 and Figure 20)³¹⁰.

The Egyptian issue network is formed by a great variety of artifacts, posts (forums and blogs), as well as videos on different topics from abortion to a miscellaneous selection of personal and political thoughts.

Links in the form of reference to other people's blogs, Facebook pages, or Twitter accounts were labelled as "NA" in the "issue" and "language" columns despite being categorised as "Link" in the "Type" column. This categorisation has helped organise the database in a way that would satisfy Gephi requirements but would also maintain the maximum possible level of detail.

³⁰⁹ The transcription of the tree-structure database into a relational-like one was suggested by Dr. Bernhard Rieder during a Gephi Workshop at the University of Warwick in May 2012.

³¹⁰ All graphs can be found in the section "Graphs' figures and images" of this chapter. All the images have been included here because of the technical difficulties associated with including them within the text. Additionally, some images are several hundred megabytes and have been difficult to resize or crop for a word formatting. In the case of Figure 20, although it may seem 'cut' or 'cropped' the wrong way, this is the way it is actually displayed on screen in Gephi.

The issue of harassment in Egypt emerges through posts, short movies, and videos of anti-harassment campaigns and performative initiatives like the BussyProject. The active involvement of Harassmap and the women-only directory *WeAreAllLaila* have also greatly contributed to the emergence of the issue. The impact of these initiatives can be visualised already on the Pivot table chart as shown in Figure 19 and on the pivot table available for download (www.oxycoms.com/clb/Tools). The Egyptian Revolution in its pre- and post-events has also great prominence, especially in relation to mob assaults and virginity tests and post-Revolutionary issues with religion propositions advanced by the Muslim Brotherhood in the Revolution aftermath.

In Saudi Arabia instead, the issue of the driving ban is prominent. However, posts and videos and pages I could find and record in my database comprises also of personal thoughts, discussions on Saudi politics, arranged marriages, and cases such as that of Samar Al-Badawi, a woman imprisoned for having denounced her abusive father.

In both cases, the language used is prevalently English; however, whereas Egypt presents an almost equal split between English and Arabic (which is completely overturned on Twitter and Facebook, where the greatest majority of posts are in Arabic), especially in blogs and videos, Saudi Arabia reveals the prevalence of English. These specific characteristics are better rendered through the use of Gephi file.³¹¹

The two datasets were saved in .csv and uploaded on Gephi to visualise the Egyptian and Saudi Networks' topologies. As it can be seen in Figs. 20 and 21, both networks have some central nodes. In order to have a better picture of the network I manipulated the data in two different ways:

³¹¹ These are available on the Google Drive Folder "Women's issues_Gephi" whose link can be found on the website.

the first network shows the characteristics of the Egyptian issue sphere. The central nodes that emerged comprised of blog posts, published respectively by Sandmonkey, EgyptianChronicles, and Sawtahniswa, and the website (migrated to the blog-based platform wordpress) ECWR. This centrality—combining in-degree and out-degree metrics³¹²—is based on the copious amount of posts produced by these four nodes and their active participation in discussions of women’s issues in the country. The four central nodes are rather apart from each other. It is however the centre of the network that reveals an intense set of interactions. Although it seems a rather confusing scenario, this particular aspect highlights how digital objects in the form of videos, articles, posts, or pictures keep together the network of women’s issues in Egypt. It also can be seen the presence of a 0 degree node, which is that of Nawal Al-Sadaawi. The site itself has remained inactive since 2010 (as are many blogs considered for the research); the interesting aspect of this node is its being central in the discussion of women’s issues for the reason that Nawal Al Saadawi is the most prominent activist and feminist and is cited in many occasions in blogs and articles. Her site came to my attention because of an article that appeared on the Guardian.co.uk³¹³ and was shared on Harassmap Facebook page. This aspect reveals how even a 0 degree node that would have otherwise been overlooked by an automatic crawler becomes an integral part of the network, enriching it.

³¹² Or the received and produced links.

³¹³ Khaleeli, Homa. “Nawal Al Saadawi: Egyptian Radical Feminist.” *The Guardian Women*, 15 April, 2010. [Online]. Available at: <<http://www.theguardian.com/lifeandstyle/2010/apr/15/nawal-el-saadawi-egyptian-feminist>>. Last accessed 21 February, 2015.

5.3.1 Egypt: Gephi and the women's issues network

As Figure 18 has already shown, the relationships between blogs, posts, and links embedded in posts were translated into a Gephi-readable dataset, saved in .csv, and imported in Gephi.

The dataset is available on the website (Oxycoms.com/clb/Tools) and can be used to manipulate the Gephi layouts and analyse the results.³¹⁴ For the purposes of the thesis I have chosen to analyse the resulting network through the algorithm Yifan Hu Proportional to highlight the clusters formed (Figure 20 and Figure 21). In fact, although Force Atlas and Fruchterman Reinghold are also useful to visualise clusters, "Yifan Hu pushes nodes with low link count much more strongly to the periphery than the others."³¹⁵ I therefore chose to use this particular layout for all the graphs.³¹⁶

Following the suggestions of the Gephi tutorials handbook, I set the following metrics: Optimal Distance=100; Tetha= 1.0, and Step Ratio =0.99, to have a more accurate view of the network. Based on these parameters I have run the datasets and queried betweenness, centrality, and diameter or the shortest path between one node and another within the network. The results confirmed that four nodes (sandmonkey, Egyptianchronicles, Sawtahniswa, and ECWR) have the greatest centrality (mainly in-degree, or the out-links). The Harassmap Facebook account has a high in-degree centrality; however, the impossibility of manually sifting through and indexing all the shared and posted material, the increased use of Facebook

³¹⁴ It is sufficient to take the .csv files and upload them, accepting all Gephi's queries.

³¹⁵ Rieder, Bernhard. "one network and four algorithms." *The Politics of Systems. Thoughts on Software, Power and Digital Methods*. October, 6, 2010. [Online]. <<http://thepoliticsofsystems.net/2010/10/one-network-and-four-algorithms/>>. Last retrieved 13 April 2014.

³¹⁶ I will discuss the differences within the Yifan Hu algorithm in the appendix. The .gephi extension of the files are available on the website to manipulate and analyse the nodes, their links and the main connections.

by the group after 2011, and the many other pages the organisation has created for coordination purposes has led me to reanalyse the page separately, through Netvizz. Nevertheless, I decided to leave the node given the many links it received from other nodes on the network. The distance between any one node in the network and another is 2.9, confirming that despite the apparent lack of links between bloggers, their interest in specific issues emerges through digital objects such as articles, videos, or pictures, thus generating a closely related network. This strong link is also confirmed by the metric “Connected Component,” which analyses the strong and weak ties in the network; in total, the network counts 10 weak nodes and a total of 582 connected nodes, all of which can be found on my website.

It can be therefore reiterated that the Egyptian network is active and issue-oriented and linked to offline acts of protests such as graffiti, street events, and art exhibitions.³¹⁷ In the course of the research the usage of Twitter and Facebook has increased, slowly spreading to Instagram and, especially, mobile social application WhatsApp, impossible to research or follow keeping the approach used to analyse blogs, Facebook open groups and pages, and Twitter accounts and hashtags. At the same time, the decreased number of blog posts per month (or their complete ‘abandonment’ as in the case of woundedgirlfromcairo.blogspot.ch), and the increased presence on Twitter of videos, pictures, and short links could potentially hint to an increased usage of mobile devices to report, discuss, and debate issues and share content online, despite this aspect this cannot be fully proved in terms of exact statistics.³¹⁸

³¹⁷ I could find out about this specific offline aspect by reading posts, articles and Facebook event pages. All URLs are available on the database and content can be accessed by copying and pasting the link on any Internet browser.

³¹⁸ It could be noticed for example that [woundedgirlfromcairo](http://woundedgirlfromcairo.blogspot.ch) last posted on her blog in 2007; We are all Laila stopped in 2009, with some sporadic posts in 2010 and 2011; <http://sawtahniswa.com> has been hacked in late 2014 but fully restored with no major loss of information; Nawal Al Saadawi’s last post dates 2011; BussyProject’s website <https://bussyblog.wordpress.com/about/> is rather inactive whereas the Twitter and Facebook accounts are kept updated; [neropress](http://neropress.com)’ last post was in 2013. On the other side, bloggers such as Fero 15 have passed from an average of two posts per

It is also worthwhile mentioning the various attempts to create directories for women's issues that move beyond national identity and boundaries and try to establish a network of women's solidarity through digital activities. Examples could be cases of "Blogging for women" or, most importantly, *Konelalaila* or, in English, *We are all Laila* (also found as *WeareallLaila*). As the pivot table shows, *WeareallLaila* is an important issue, discussed in many different occasions on the Egyptian women's issues network. Blogs such as *EgyptianChronicles* have the widget and the embedded logo of the directory. The initiative started in 2006 and gained momentum in 2007; at first sight the initiative seemed to establish a network of women's solidarity through blogs, Facebook posts, widgets or embedded pictures of the logo on blog pages.

It was therefore a point of contact, an issue and a space of reflection, an initiative, and a directory at the same time. However the in-depth content analysis that preceded the upload of the list on Gephi told a different story; the project's contributions slowed down in 2009 and, despite being awarded the best initiative prize at the 2010 World Summit Youth Award, it wasn't possible to find posts or shares after 2010; the Twitter account (@KolenaLaila) has been inactive since 2011 and there are no Twitter or Facebook #Laila, #Kolenalaila, or #weareLaila (or #weareallLaila in Arabic or English).³¹⁹ Despite this inactivity, *Konelalaila* is a good example of how technowomen emerge and co-constitute women's issues.

month until 2012 to one or two posts every six months since 2013. The only two exceptions are sandmonkey and egyptianchronicles, both contributors to Global Voices Online (as it can be seen on their profile pages).

³¹⁹ To date the research has used all possible combinations in English and Arabic; however, there could be the case that the initiative changed name altogether and there is no way of knowing if the project is continuing under new denominations or new names. On Facebook, Kolena Laila is present as a proper (and private) account (<https://www.facebook.com/kolenalaila?fref=ts>) and as a Public Figure account (<https://www.facebook.com/pages/Kolena-Laila/98753733308>). I haven't been able to access the private account despite my request of friendship; the public page has instead remained inactive since 2011.

KolenaLaila or *We are all Laila* (or simply Laila) was an initiative that would have united Middle Eastern bloggers for a day every year; for one day, all bloggers in their own countries would have posted content on and talked about the daily challenges women face in their own countries. The initiative itself was inclusive of all genders so men and women alike could blog or share a thought on the meaning of being a woman in their own reality, the challenges, and the thoughts. These reflections would have emerged solely and exclusively online; KolenaLaila would have therefore become a place where different objects could convene and make Laila emerge.

As previously discussed, the analysed blogs and posts show a great variety of stories, in English and Arabic alike, which go from denouncing the societal acceptability of sexual harassment to poems, imaginary dialogues between bloggers, and Laila. According to the World Summit Youth Award, “Laila is chosen as a symbol for each and every woman, trying to mould her independent personality in an oppressive society. Using the platform they (women) can [...] review obsolete values and traditional ideas related to females, and discuss how society enacts them with no consideration of their impact on women.”³²⁰

Laila is therefore simultaneously a network and a node in the women’s issues network; it shows the emergence of technowomen. Laila in fact cannot be solely interpreted—as previous chapters have shown—as an initiative aimed at empowering women or forming a solidarity network. On rather the contrary, Laila’s stories take the shape of digitally mediated artifacts and the everyday struggles of women that emerge through binary code, coding practices (a different one for each platform where Laila takes life and emerges), and fractional updates allow blogs, tweets, and delicio.us. bookmarking system to continuously “update” her. Laila is therefore a

³²⁰ World Summit Youth Award, “We are All Laila”. [Online] < <http://www.youthaward.org/winners/we-are-all-laila> >. Last accessed 23 December 2014.

miscellany of formats that find space and simultaneously live on different platforms. The different platforms and the different ways in which Laila emerges make Laila multiple, an issue, a node, and a network; Laila is any (or every) girl in the Egyptian and Arab world, but it is also a meeting point of women's issues; it is singular (Laila) and plural (We are all Laila). Most importantly, Laila becomes a place, and expands, emerges, and contributes to the making of the multi-layered and networked map of women's issues in Egypt. It is one of the ways in which different sets of relations between different actants and different layers co-constitute the existence of issues (that of being Laila), expands and contributes to the formation and constitution of technowomen, and to the complex work of mapping women's issues as they emerge on the digital layer. It in fact emerges from and is made of digital artifacts (posts and videos alike) that live in their singularity (each post lives on its own blog platform or own Facebook page);³²¹ however, such artifacts co-create women's issues in Egypt but, also in the Arab World.

Another aspect must be taken into consideration, or that *Laila* becomes also archive and repository of stories. In fact, although most blogs still have links and widgets to the initiative website, the directory of stories, reflections, and varied digital artifacts remains inactive. Some of the *delicio.us* links are deactivated, and some of the latest posts and comments date 2009/2010. Facebook public page and Twitter accounts have been inactive since 2011, and to date I couldn't find any specific explanations of why the initiative was suspended or if the interest toward the initiative faded away.³²²

³²¹ I have not found any # on Twitter that might suggest the existence of a thread on the platform.

³²² This is just an assumption but there seems to be no claims or notifications from the initiative's coordinators on the project suspension or end. Some of the Twitter links report a 404 Error and I couldn't find any mentions with regards to its end online on articles or forums. There seems to be no mention of the initiative after 2011.

Despite being an inactive node, it is nevertheless a trace in the digital history of women's issues, footprints of technowomen's activities that informs qualitatively and quantitatively the Egyptian women's issue network. Laila is a network of artifacts in its own right without losing its characteristic of being a rather important and central node in the network I have been tracing. The posts accessed and read with regard to the project KonelaLaila or *We are all Laila*, or simply *Laila*, in fact have brought to the fore the issue of sexual harassment, patriarchal rhetoric and oppressive regimes, societal taboos, and daily struggles. I focused in particular on sexual harassment, because it appears persistently in the Egyptian network also through other projects, documents, and digital artifacts.

In particular, other interesting nodes—that at a closer look become networks—are the free theatre performances promoted by *The Bussy Project* and the crowdsourced initiative and organisation Harassmap. These two initiatives emerged during the research in the analysis of the Egyptian women's network. However, the active involvement of other organisations and projects that tackle the issue cannot be neglected³²³; these traces, stories and initiatives, projects, and organisations make sexual harassment emerge in all its relevance as an issue.

The Bussy Project (Bussy = I look) is an initiative launched after Eve Ensler's "The Vagina Monologue" was performed at the University of Cairo in 2005.³²⁴ As a node in the network, Bussy Project has received the highest inlinks and outlinks. *Bussy Project* reinforces the relevance of sexual harassment as an ordinary issue of being women in Egypt. A free theatre project launched in 2006, the *Bussy Project* has gradually harvested clamour

³²³ In the next chapter I will name some of the organization born after the Revolution, specifically I saw Harassment, Stop Street Harassment that have become increasingly active and have increasingly been contributing to Harassmap campaigns.

³²⁴ El-Fiki, Mona. "Eve Ensler inspires Egyptian women to write plays about harassment". In Al Shorfa.com [Online] < http://al-shorfa.com/en_GB/articles/meii/features/2008/10/23/feature-01>. Last accessed 1 January 2015.

and international support. As the database shows, the initiative has been mentioned in different languages, and the content analysis of the articles found have revealed positive acceptance in Europe, especially in Italy, France, and Germany.³²⁵ Despite the initial bad coverage in local press, it represents perhaps the best example of a narrative of unspoken issues, events, or taboos that highlight the multiple life of the issue of harassment itself. Performances take place in physical spaces (theatres, cafes, or improvised stages like busses) and the recorded videos are then uploaded online, becoming co-constitutive of the issue of harassment in Egypt.

Although this research has no intention to claim that the central issue in Egypt is sexual harassment and recognises the plethora of other issues that exist, the centrality of this matter has been taken into consideration and further investigated. As a consequence I could discover a strand of art projects, community outreach campaigns, visual arts performances, laboratories that deserve attention in terms of the digital traces they leave (and through which they emerge), but also the intrinsic link between what emerges online through technowomen and other layers of the complex multi-layered map; the entangled nature of technowomen inevitably lead to other layers, political, social, with events³²⁶ or campaigns organised, coordinated, or advertised, reported, and monitored through digital media.

The analysis of the blogosphere combined with the analysis I undertook with regard to the issues of sexual harassment led me to funnel my Facebook and Twitter research. As previously highlighted, in the second stage of the research I had to take into consideration the impossibility to execute automated (or manually executed) cross-platform analysis. As a

³²⁵ This observation can be checked on the URLs related to the Bussy Project that can be found on the database available online.

³²⁶ By event I mean cases of witnessing harassment, awareness events organized by Egyptians (like the case of the Biking campaign organized by students of the Zagazig University in 2013).

consequence, I decided to investigate the two platforms separately, selecting specific groups or pages (for Facebook) and specific hashtags for Twitter (leaving out the analysis of accounts). In fact, as previously argued, the particularity of the Egyptian blogosphere is the very good social media integration with blogs; each blog I analysed contained links to the bloggers' other blogs, Facebook pages (usually personal profiles or specific groups), and Twitter accounts (as exemplified in Figure 14). It was therefore easy to move ("migrate" almost) my analysis on Facebook and on Twitter. However, rather than following personal accounts on both platforms, I decided to follow publicly accessible groups, pages, and campaigns.

Facebook and Twitter are rather difficult to analyse as far as keeping up with the frequency of updated content, shares, comments, and the embedded links. Although easier to manipulate,³²⁷ Twitter conversations can be challenging, because current available tools only allow monitoring of posts not older than two or three weeks;³²⁸ additionally the manual analysis of short links and embedded links is almost impossible.

During the research I could also notice that hashtags (#) have started to be routinely used across multiple platforms and tracking them systematically can be a difficult task. I will discuss cross-platform analysis in my conclusions, along with the pitfalls of visualisation tools and the need to combine quantitative analysis, visualisation, and tools for qualitative analysis such as NVivo.

³²⁷ Twitter developers site offers a vast array of opportunities to create apps to extract tweets. R programming language is being increasingly used to connect with the O-Auth (1.0 and 2.0) and create apps to extract tweets and undertake sentiment analysis, given its statistical precision and its open access characteristics.

³²⁸ DataSift allows retrieval of tweets up to two years old but the current "Developer" page (aimed at single individuals) doesn't offer the complex dashboard offered instead to companies like Hootsuite or CBS, which then re-sell the information. Additionally, after a trial (\$10 worth) the developer has to "top up" in order to continue using the tool.

5.3.2 Facebook analysis of Egyptian pages and general findings

I have analysed a total of 3 groups, using Netvizz.³²⁹ For each of them Netvizz has been used to detect posts, comments, and connections (there is a maximum of 999 retrievable nodes).³³⁰ I have analysed *Harassmap*, *Egyptians Against Sexual Harassment* and *Op-Anti Sexual Harassment in Egypt*. I have also analysed the fan page *Anti-harassment Movement*, given its prominence in terms of likes, followers, and activities. With regard to the Saudi women's issues' network, I have analysed the pages *Support #Women To Drive* and *Saudi Women To Drive* and the group *Women's Right to Drive in KSA*. Although there are other pages, closed groups, and personal profiles I have been following, I have not included them in the Netvizz search. The reason behind the choice of not focusing on these pages and accounts is twofold: on one side, it would have been an enormous task for a single person to do, and secondly, despite most of the bloggers' links to their personal pages on Facebook, an analysis of their personal profiles and posts would have raised questions with regard to privacy, given that I could follow their activities, because I was granted "friendship" and was allowed to join closed groups. It would have been therefore unethical to exploit personal information, given that the purpose is to visualise what is publicly available and not the private and personal comments between individual users.³³¹

³²⁹ The Netvizz runs were executed between December 2014 and January 2015. I added tables and figures in April 2015 therefore the numbers of likes, comments and share might have changed. The Netvizz/Gephi dataset is available for further inspection on the website <http://www.oxycoms.com/clb> (under the pages 'Egypt' or 'Saudi Arabia').

³³⁰ Netvizz also offers to select specific dates; however, this operation requires longer time, is slow and in many cases a message appears of an API error, in spite of fast Internet connection.

³³¹ As Bernhard Rieder in fact points out, it is quite difficult to assest that a person's identity on Facebook corresponds to that of a blogger or a twitterer. Bernhard Rieder, "Digital Methods Workshop" University of Warwick, 9 May 2013. At the same time –and this was especially true for Saudi Arabia- the personal profile was closed and the link to facebook was a page instead.

The .gdf files are available for further manipulation. As previously highlighted, 999 random posts and related interactions were analysed for the above-mentioned pages. The results are showed in Figures 22, 23, 24 and 25 for Egypt; Saudi Arabia will be discussed later. It ought to be clarified that .gephi files (available online) can be manipulated also to show the type of posts (videos, links, users, and any other digital object posted on the page). I focused on the level of engagement based on metrics such as likes, comments, shares, likes on comments, and overall engagement (or the mathematical sum of the four metrics).

The page *Egyptians Against Sexual Harassment* was opened in 2012, and it has since maintained an active presence on Facebook with daily posts about news on Sexual Harassment in different forms and shapes. The page has 175 likes, which is very little compared to the other two analysed pages (respectively 42,820 likes for Op Anti-Sexual Harassment in Egypt and 39,614 for Harassmap). The level of engagement of the page, which I followed since its beginning, has always been rather low. This is also mirrored in the results. In this particular graph (Figure 22) I have analysed the overall level of engagement. In Netvizz terms, overall engagement is the mathematical sum of likes, comments, shares and likes on comments (or those comments that receive a “Like”). On the “Ranking” scale offered by Gephi,³³² I have selected the ‘Engagement’ function; the colour scale that Gephi proposes goes from blue (indicating low level of overall engagement) to red (indicating a high level of engagement). As the graph shows, the predominance of blue indicates a low level of engagement, with the majority of the posts being published by the administrator of the page and little level of sharing and likes, comments, and overall activity on the page itself.

³³² There is no exact choice of function. I selected Ranking over partition for the ease to then link directly to the node that received the highest level of engagement.

Despite this little relevance on a quantitative scale, it is important to notice that this particular page is a repository of links and videos that circulate and go viral in Egypt. Contrary to the other two pages, *Egyptians Against Sexual Harassment* is neither an organised community that condemns harassment like Op-Anti Sexual Harassment nor a community-oriented organisation that tackles the issue through education and community outreach, like Harassmap. This particular page can be considered a small archive of relevant information with regard to the issue of harassment.³³³ In fact, although it was not possible to manually collect the URLs shared on the page due to time and resource constraints, following the page for two years and the activity of monitoring the overall network of women's issues in the country have highlighted its contribution as a repository of images, videos, and articles covering the issue of harassment in Egypt.

As previously introduced, other pages analysed through Netvizz and Gephi were *Harassmap* and *Op Anti-Sexual Harassment/Assault in Egypt*. The *Harassmap* results can be viewed in Figure 23, where I have again used the 'engagement' in the ranking option offered by Gephi to analyse networks. In this case the engagement levels were attributed on a colour scale from pink (low level of engagement) to green (high level of engagement).³³⁴

The Harassmap Facebook Page has received to date 39,614 likes; however the level of engagement seems to be low, apparently offering a scenario similar to that of *Egyptians Against Sexual Harassment*. The majority of the posts are shared by the administrator of the page and there seems to be a low level of engagement in terms of shares, comments, and

³³³ I can say that Op-Anti Sexual Harassment is event oriented and Harassmap is community-focused because I have analysed the content of both pages over time and because I had the pleasure to work with the Social Media Team in Harassmap for the period of eight months during the PhD.

³³⁴ This was mainly done to avoid confusion with colours and networks rather than for any analytical reason.

likes. It was in fact possible to highlight how 71.9% of the overall posts receives 0 comments; 10.85% of posts received 2 likes; whereas the greater majority of posts (38.74%) received 1 like.

The results also show that likes are more used than comments and shares. In fact, in 71.89% of the cases, data on shares wasn't available (null); 19.93% received 0 shares; a rather smaller percentage of posts received 1 share (4.39%) or 2 shares (1.41%); and 2.38% of posts were shared 3 or more times. These results—although based on a randomly selected set of posts on the page—reveal a highly liked page with a low level of engagement, despite the activity of posting on a daily basis.³³⁵ This aspect will be touched upon in a later chapter where I discuss the strong offline presence of Harassmap and its impact through what the organisation calls 'community initiatives'.

The page *Op-Anti Sexual Harassment/Assault in Egypt* (Figure 24) receives a total of 42,820 likes and was born as a group aimed at combating sexual harassment's "incidents and collective sexual assaults that women face" but with the specific focus on "[...] squares during sit-ins, protests, and clashes in the perimeter of Tahrir square."³³⁶ Contrary to the other two pages, *Op Anti-Sexual Harassment/Assault in Egypt* is very active in terms of engagement, with some nodes receiving 2006 between likes, comments, like on comments, and shares. As in previous cases, the results have been visualised through a colour scale that goes from green (low level of engagement) to red (high level of engagement). I have isolated the three most 'engaging' posts. Given the amount of interactions retrieved through Netvizz, the Ranking parameter I used in the previous two cases to detect central actors had to be used in combination with the "Partition" parameter.

³³⁵ The graphs here reported doesn't report the node labels and the central nodes (most active ones) have not been enlarged for reasons of space. However, all the .gephi files are available on the website (Oxycoms.com/clb) and can be analysed, manipulated and further worked upon.

³³⁶ Op-Anti Sexual Harassment/Assault Facebook Page, "About" [Online] < https://www.facebook.com/opantish/info?tab=page_info >. Last accessed 3 January 2015.

In fact, the partition allowed me to visualise the central networks (so, the ones that recorded a higher level of interaction); the ranking “diamond” allowed me to isolate such actors and analyse them. Of course, the dataset has also been fundamental. I have in fact filtered the “Engagement” column in order to retrieve the links to the most popular posts.

The first most popular post reports an event of violence prevention near Tahrir square in July 2013. It received 107 comments, 268 likes, 1,208 shares, and many of the comments have been replied to or liked. The post reports times and ways in which volunteers prevented a case of sexual assault. The second-most-popular post is about Qahera, a comic book heroine that saves Muslim women from harassers and stereotypes alike; the post received a total of 1,795 likes, comments, like on comments, and shares. The last one, receiving 1,320 between shares, likes, likes on comments, and comments, is another case of reported attack on a harasser in the centre of Cairo.

Compared to Harassmap, this particular organization/initiative aims more at preventing (or stopping or reporting) cases of assaults in the city of Cairo, although the main focus is principally Tahrir Square through intervention. This way of ‘volunteering’ as vigilantes to prevent cases of harassment and assault is not new to Egypt; especially during Eid groups of volunteers patrol streets. The spread of vigilantes also became a legal problem especially during the Egyptian Revolution and its aftermath. In Alexandria and Cairo groups of volunteers in 2012 chased and beat up harassers during *Eid Al-Ahda* Festival; in Cairo, harassers were pepper sprayed and also sprayed “I am a Harasser” in Arabic on their backs.³³⁷

³³⁷ Fitzsimons, Rebecca. “Vigilantes Are Tagging Egypt’s Sexual Harassers with Spray Paint”. In Vice, 8 November 2012, [Online] <http://www.vice.com/en_ca/read/vigilantes-are-fighting-back-against-sexual-harassment-in-egypt>. Last accessed 12 December 2014. In 2012 the spread of vigilantes was coupled by the appearance of volunteers for the “Promotion of Virtue and Prevention of Vice”, some of which were also active in 2011 during the Revolution. Both groups patrolled the streets of Cairo and Alexandria during Eid in 2012. The unofficial committee of the prevention of vice and promotion of virtue was firstly only discussed about (and mostly attacked) on social media and opinion-site Al-Akhbar. In March 2013 the Al Ahram online edition recognized the existence of the group and

The last page I analysed is perhaps the most popular and unique mainly because it is a Facebook Fan page, usually used by brands to engage with fans. The page, liked by Harassmap members and *Op Anti-Sexual Harassment/Assault in Egypt*, is managed by (or for) the Non-Governmental Organisation *Anti-harassment Movement* (<https://www.facebook.com/Ded.Ta7rosh>).

Ta7rosh was formed after the Egyptian Revolution with the “[...] plan to combat each type of harassment across the coming years.” Following the long description of the organisation, “[...] the movement strives to create a law that criminalizes sexual harassment in Egypt.” Its activities focus on two streams: awareness campaigns and “intervention” or teams of volunteers “available during the political demonstrations and the street gathering during feasts with the purpose of protecting the females against sexual harassment.”³³⁸

Using Netvizz I analysed 999 random posts that generated a total of 35,060 users liking or commenting 212,757 times. The .gdf file has been once again uploaded on Gephi to visualise the interactions and the engagement levels. I focused particularly on the central nodes in relation to engagement, using ranking and partition options on Gephi. I have also analysed the network diameter (1) and the closeness between nodes. The page has 130 weak connections between the components of the network as opposed to 36,060 connected components.

In terms of engagement there emerge specific nodes; however, the page is very well integrated with YouTube (in the section “Welcome”) and

discussed potential cases of religious intolerance linked to the group. Al Ahrām Online, “Unofficial morality police launches in Egypt.” [Online], <<http://english.ahram.org.eg/News/65868.aspx>>. Last accessed 5 January 2015.

³³⁸ Anti-harassment Movement Facebook Page “About” [Online]. <https://www.facebook.com/Ded.Ta7rosh/info?tab=page_info>. Last accessed 15 January 2015.

Twitter. The page organisation is very sophisticated and posts are managed through tradablebits,³³⁹ one of the many supports to social media marketing. This sophistication makes the page rather unique and more marketing-oriented, leading to question the organic nature of the “likes” and posts’ engagement.

The results presented in this section of the chapter highlight the levels of interactions within the selected Facebook pages in the form of engagement. The main limitation of such an analysis is twofold; on one side, it could be argued that it lacks a comprehensive and integrated investigation of how issues are discussed and how they emerge. On the other, although one of Netvizz’s features is comment retrieval in a .tab format, anonymity of posts doesn’t help to understand if there emerges a hierarchy of users that are more active than others. In addition, there is little possibility to understand if a specific object (here intended as video, a picture, or an event) is discussed, commented, or mentioned and shared on other pages within Facebook or on other platforms such as Twitter but also Pinterest and Instagram, both popular in Egypt³⁴⁰.

Despite these limitations, these results lead to reflect on the multiplicitous life of a specifically digital issue—in this case, sexual harassment. The above-discussed Facebook pages are a network of software updates—specifically, fractional updates—users, digital objects that might be embedded, shared from other digital and non- contexts and JSON codes that coalesce, showing the multiplicity of the issue of sexual harassment in the country. At the same time, each of them might be considered a node in the bigger multi-layered and networked map of

³³⁹ Tradablebits partners up with Hootsuit, which is the main platform used by NGOs (given the good dashboards offered for free). A description and an explanation of the platform, the dashboard and the features tradable offers can be found at :
https://tradablebits.com/?utm_source=http%3A//342970.tbts.me/&utm_medium=poweredby-link&utm_campaign=twitter-apps-embedded-top

³⁴⁰ According to Socialbakers there are more than 27 million Instagram users and 25 million Pinterest users. Available at < <http://www.socialbakers.com/statistics/> >.

women's issues. Each page in fact enriches and expands the multi-layered and networked map, altering its topology and contributing to a discussion on the interweave of human agency and digital artifacts. Finally, each of them could also be taken as an example of the emergence of technowomen. Each piece of content shared on the analysed pages could in fact be further taken in its specificity and emergence on the digital layer, opening a reflection on the distribution of agency through code and its inevitable link to the ways in which certain technical aspects—in this case non-relational databases that allow the management of big amount of data—are intrinsically political and social.

5.3.3 Saudi Arabia: Gephi and the women's issues network

Saudi Arabia's women's issues' network is very different from the Egyptian one. The network of blogs that were analysed between 2009 and 2014 show a very close relationship between the bloggers. As previously clarified, I used Issue Crawler in the early stages of the research; however interesting for an initial approach to the issues' blogosphere, the results were nevertheless unable to provide any interesting insights with regard to the nature of the relations between the blogs. I therefore undertook the same procedure I followed with Egypt and built an issue-oriented and object-based database (the full database is available on the website at <http://www.oxycoms.com/clb/Tools.html>), following the Gephi readable structure, already discussed and showed in Figs. 15 and 16.

The results have confirmed very strong ties of the bloggers and the strong alignment of issues discussed online. The Saudi women's issues network is highly organised and supported by a lively and constant usage of Twitter and Facebook. The manual search has collected a total of 795 nodes. Contrary to Egypt, Saudi Arabian blogs have always maintained a steady activity and bloggers link to each other, and— interestingly enough —most

(if not all) of them have a great attention to blog structure. In fact, for example, when linking to a source outside their page (or outside the specific posts) the page opens on another tab, making the networked reading of the post very easy and fluid. The result can be shown in Figure 27.

Whereas the Egyptian network revealed a transition toward Facebook and Twitter, Saudi Arabia has maintained a strong presence of blogs, with new nodes still coming to light on the later stages of the research.³⁴¹ Although the universe is much smaller than the Egyptian women's issues blogosphere in terms of number of users, the interactions are much more dynamic, and this explains the richer number of objects that are linked to each other. Contrary to Egypt, the quantity of posts per bloggers is staggering, and the interactions between bloggers make the network a rather intimate universe of digital objects and users. It could be in fact argued that there is some 'familiarity' between bloggers, and their very local nature makes their interactions very intimate. The vicinity of the network is also suggested by the network diameter (7) but, most importantly, by the distance between any two nodes in the network (which is 2.9, meaning that between any node A and any node B in the networks there are only 2.9 steps). Contrary to Egypt, I couldn't identify any self-looped nodes.

Comments or critiques on posts show a high level of interaction between users. Issues such as the veil, abaya, and the driving ban occupy a central position in the network and emerge in many different forms such as

³⁴¹ One example can be offered by the blog *taraummoma* (<http://taraummoma.blogspot.com>) that I only discovered in April 2014 when trying to gather more information about the 1991 women's driving protests. The blog somehow escaped the initial list and the many Boolean searches undertaken in vertical and general search engines. After some investigation, it appeared to have weak (if not absent) relations with other bloggers or other blogs but it has been taken into consideration in the final analysis of the network. The graph present in this chapter excludes nodes labels for matter of clarity but it is possible to access the .gephi file on the website and upload it to Gephi for further manipulation and analysis.

forum conversations, blog posts, comments, Facebook and Twitter campaigns, as well as “video protests.”³⁴²

However an attentive analysis of the content of posts, Facebook pages, and even Twitter conversations (both explained later on in the chapter) show how they do not exclude other issues or do not prevail on other issues; rather, on the contrary, although these issues have received much criticism, they carry with them a strong political weight; through the case of the campaign “Stop Men from Selling Lingerie,” I will show how the boycott of lingerie shops carries a much greater political debate that involves the legal framework, economic settings, religious, and social conservative attitudes while at the same time contributing to the emergence and visibility of women’s issues and women’s increasingly political and relevant role in the country.

The campaign ‘Stop Men from Selling Lingerie’ was voiced and supported by bloggers SaudiWoman, Qusay, and SaudiJeans and discussed throughout the blogosphere in 2009 and, again, in 2010. The issue of lingerie emerged very briefly, replete with political criticism. SusieofArabia claimed “Intimate apparel business owners who have tried hiring sales WOMEN are [...] complaining that [...] saleswomen are incompetent. Rubbish! Poppycock!”³⁴³ The initial boycott started with Dr Reem Asaad, lecturer at the Business and Finance Department at Dar Al-Hekma.³⁴⁴ She highlighted how the choice of salesmen rather than saleswomen was not a religious requirement; on the contrary, it was an economic manoeuvre that

³⁴² “Saudi Women make video protest”. In BBC Middle East, 11 March 2008. Available at http://news.bbc.co.uk/1/hi/world/middle_east/7159077.stm. last accessed 21 February 2015.

³⁴³ Khalil, Susie. “Much Ado about Nothing”. In *Susiebigadventure blog* [Online] Available at < <http://susiebigadventure.blogspot.co.uk/2010/02/much-ado-about-nothing.html> >. Retrieved 2 February 2015.

³⁴⁴ Hancock, Stephanie. “Saudi Lingerie trade in a twist”. In BBC Middle East, 25 February 2009. [Online]. Available at <<http://news.bbc.co.uk/1/hi/8514201.stm>> last accessed 2 February 2015.

would reduce labour costs because immigrants from South East Asia could accept lower salaries.

The issue brings with it a set of societal taboos as well as political and economic issues. The campaign was mostly organised and existed online, specifically on blogs and forums. It received very limited attention by local media, with only one article published by Arab News, as a blog post reports.³⁴⁵ International press instead showed interest, in particular with two articles appearing on the BBC Middle East website, one in 2009 and one in 2010.³⁴⁶

The boycott and the campaign became an occasion to reiterate women's aversion toward the government's conservative position with regards to women's participation in the making and functioning of the social, economic and political life of the country. Boycotting lingerie stores became a way of standing up against the status quo of salesmen in women's stores but also a fiery criticism against the country's ban on driving, leave the house unaccompanied, and working in mixed environments; it also became a way to criticise the government's slow response toward the staggering increase in women's demands to enter the job market and the related female unemployment figures. As I highlighted in previous chapters, women in Saudi Arabia cannot drive nor can they own their own documents; they are not allowed to leave the domestic premises without a chaperone or a male guardian. The ban on driving stops many women from full-time employment. The restrictions on the types of jobs that women can be hired for—despite the fact that things are slowly changing—significantly reduces the range of roles women can apply for and be hired to cover.

³⁴⁵ Article now disappeared; original URL: <http://www.arabnews.com/saudi-arabia/article20118.ece>. Link embedded in the post "Much Ado about Nothing". In *Susiebigadventure blog*.

³⁴⁶ "Saudi call for boycott against men selling lingerie". [Online] <<http://news.bbc.co.uk/1/hi/8514201.stm>>. Last accessed 2 February 2015.

The lingerie campaign therefore becomes an occasion to stress the multiple issues that emerge on different layers—economic, social, political and religious—and that assemble and coalesce on the digital layer through blog posts, discussions, Facebook posts, and closed groups.³⁴⁷ It didn't solely entail online communication and coordination to boycott stores but it also served the goal of reiterating women's determination to improve their status in the country, and to become visible.

The temporary dimension of the campaign and the multiple issues it encloses must be recognised in that they enrich the multi-layered map as both, a theoretical concept and an empirical tool of analysis. As I will discuss later on in the chapter in relation to Twitter, this research has met with the difficult task of following conversations and retrieve, report, and analyse short-lived conversations. I have briefly addressed how *Laila's* Twitter account had presented the problem; I have in fact discussed how although Twitter's short links can be considered traces of the ways in which Laila comes to life through and on the digital layer, the impossibility to follow them—because they have expired or have been removed—has somehow reduced the chances of drawing the network and enriching the overall map. This lack generates blind spots; relations are in fact established between actants across multiple layers, thus forming networks, but, as in the case of Laila and Twitter, such relations can be abruptly interrupted or severed.

In the case of this campaign, the multiple issues, the legal framework that restricts women to certain job roles, and the religious (and as a consequence) —political conservative view of women's positions meet, are intertwined, and only emerge on and through the digital layer. However, although the campaign remains as part of the dataset input in Gephi, the boycott was somehow 'forgotten', despite the fact that a 2011 Crown ruling

³⁴⁷ it is the case of the group <https://www.facebook.com/groups/20469931029/> فقط للنساء النسائية الداخلية الملابس!!

allowed women to work in lingerie shops was overturned in early 2012, bringing with it a whole new set of issues.³⁴⁸

Figure 25 shows the network of women's issues in Saudi Arabia in terms of degree and centrality (colours and sizes of nodes) as well as in terms of issues. The central node of the women's issues network in the country is SaudiWoman (<http://www.saudiwoman.me>) followed by alternativesaudivoice (<http://alternativesaudivoice.com>), and Canadian blogger Czechlara (www.czechlara.com). The network results are very well connected; like Egypt, there is a higher concentration of links at the centre of the network; however, contrary to Egypt, an attentive analysis of the edges highlight how the connections are not established through artifacts (or objects) such as videos or articles but through connections between bloggers. In fact, almost all bloggers that discuss the diverse array of women's issues in the country link to each other.

In terms of issues discussed instead, the graph highlights the predominance of the driving ban, followed by short-lived campaigns such as that of Samar Badawi (Figure 26). The campaign was organised following the arrest of a woman (and a local activist) who filed a court case against her abusive father but was conversely reported to the court by her father, who accused her of disobedience. Despite Badawi denounced publicly the abuses she endured for 15 years and asked to transfer her guardianship to her uncle, the court ruled in favour of her father. As a consequence, Samar Badawi was condemned to 10 years in prison, and was released only after a long local and international campaign.³⁴⁹ However, issues such as divorce

³⁴⁸ "Saudi court overturns circular allowing men and woman to work together in shops". In Al Arabyia, 30 May 2012. [Online] < <http://www.alarabiya.net/articles/2012/05/30/217556.html> >. Last accessed 2 February 2015.

³⁴⁹ Human Rights Watch. "Saudi Arabia: Where Fathers Rule and Courts Oblige. Fathers Imprison Adult Daughters, Prevent Marriage, Obtain Grandchildren's Custody." 18 October 2010. [Online]. Available at: <<https://www.hrw.org/news/2010/10/18/saudi-arabia-where-fathers-rule-and-courts-oblige>>. Last accessed 10 July 2015. The campaign also saw the intervention of Michelle Obama and Hilary Rodham Clinton; Badawi was released in 2011 and her guardianship re-assigned

and arranged marriages (personal accounts or genuine questions about how the couple works out the many entanglements of an arranged marriage) have also emerged, especially through the blog *czechchiara*, a Canadian psychologist very active in the Saudi blogosphere.

Another important aspect is the predominance of English as a language of choice for blogs, a situation completely overturned by Twitter, where Arabic is predominant. The importance of the driving ban has led me to look into the issues on other platforms such as Twitter and Facebook, both of which will be discussed later on.

The quantitative analysis offered by Gephi couldn't highlight an interesting characteristic of such a network, which is the dense sets of links generated by comments, responses, and discussions around particular posts published by bloggers. It is also interesting to notice the way bloggers re-use each other's content, re-posting blog posts but also pictures or videos. This aspect is very peculiar to the Saudi Arabian network (this can be recognised through the automatic sentence "original post [URL]"). The network is a very good example of how hyperlinks are used to connect to each other, share and comment, reuse and criticise, debate and discuss, but also connect indirectly as well as directly two or more bloggers to one particular artefact (i.e., a video).

The network also reveals the mix of personal thoughts with more political questions arising for women in the country. Some of the bloggers, such as *saudiwoman* and *qusay* (*qusay.com*) keep a very journalistic approach; on the other side, bloggers such as *Blue Abaya* and *SusieofArabia*³⁵⁰ mix their thoughts and news with information about the

to an uncle. She has since married her lawyer and resumed her campaigning activities for women's rights to drive and vote in the country.

³⁵⁰ In early 2012 the following message appeared on *Susie of Arabia's* blog (<http://susiesbigadventure.blogspot.ch>): "[...] Websites that are scraping content in the form of RSS feeds, bots, or manual methods will be reported to their web host with a DMCA take down notice." I therefore stopped scraping her blog to enrich the database to comply with the express request of the

beauty of the country, hidden places, and impressive pictures of the country. In these respects, the analysis of the Saudi blogs on and around women's issues represent a case of alternative sources of information, sometimes professionally written and masterfully defended when attacked, in other cases, instead, talked about from a personal perspective. The mix of personal events and critical attacks on governmental initiative and societal practices is a recurring format. It is the case of BlueAbaya (www.blueabaya.com), who shares pictures of book events but also critically attacks the practice of *Nikah Mysrya* (short marriages) and is highly active on Facebook, discussing rather miscellaneous topics, from life in Finland to pictures and tourism and the women's driving ban, and posting pictures of her art work.

The stories that emerge and the issues that are voiced are made of a mix of very professional reports, protests, and personal stories of everyday-life experiences, and in particular aspects of women's lives in the country. The humour that characterises most of the blogs, the caustic comments, and the passion of some of the bloggers' writing makes the Saudi blogosphere unique, not only for such an interconnected network of URLs mixed of people, campaigns, and tweets but because of the ways in which these issues emerge from an enmeshed set of people and digital objects.

The Saudi Arabian network differs greatly from the Egyptian network; contrary to Egypt in fact, the network is highly maintained by the social relations established by the bloggers and their active contribution to the emergence and co-creation of women's issues. As elucidated in previous chapters, Saudi Arabia doesn't have a history of women's movements and struggles such as in Egypt. However different, the analysis of the digital layer and the emergence of certain issues and the ways in which it

blogger. Despite my many attempts to get in touch with the author of the blog (in order to have an interview and ask for permission to discuss her blog), to date there have been no replies or authorisations.

contributes to discourses of women's empowerment, emancipation, and participation in the country's life contributes to the enrichment of the multi-layered and networked map. The several layers that intersect, enmesh, and emerge on the digital layer contribute to the map but also make the map become an empirical tool through which accounts of Saudi women's rights find space and where activities, actions, and criticism against the country's status quo are written, and can somehow start to be recognised, considered, analysed, recorded, and archived.

The network I was able to trace in Saudi Arabia is dense and appears to fit the observation offered by Manuel De Landa about close networks where "everybody knows everybody else and people interact in a variety of roles"; however, it is also correct to argue that "information that circulates tends to be well known to participants."³⁵¹ Contrary to Saudi Arabia instead, the Egyptian network has proved to be a low-density ensemble of digital objects; however, following De Landa on his analysis of networks and assemblages, it could be highlighted that although somehow scattered, the objects that make the network are "[...] capable of providing their component numbers with novel information [....]."³⁵²

5.3.4 Facebook analysis of Saudi pages and general findings

Given the relevance of the driving ban, I analysed two Facebook pages, namely *Support #Women To Drive* and *Saudi Women To Drive*, and one group, *Women's Right to Drive in KSA*.

The page *Support #Women to Drive* receives a total of 18, 977 likes and was started in 2011 with the goal of offering a platform for women to

³⁵¹ De Landa, Manuel. *A New Philosophy of Society. Assemblage Theory and Social Complexity*, London: Bloomsbury Academic, 2006, 35.

³⁵² De Landa, Manuel. *A New Philosophy of Society. Assemblage Theory and Social Complexity*, 35.

share their pictures while behind the steering wheel.³⁵³ The posts are mainly about pictures and campaigns organised by Saudi Women; there is a good presence of videos and, most importantly, the Saudi activist Monaf Al Sharif receives attention through posts on her activities but also on her frequent clashes with the police (and subsequent arrests). Through Netvizz I have visualised the posts and the overall interactions between users as Figure 29 shows. The levels of engagement have once again been analysed, and the results have shown a rather active and interactive page, with a good number of central nodes (mainly posts about women being detained for driving); in particular, the page itself represents a central node; in order of importance there follows a post about a campaign to challenge the driving ban posted in October 2014. The post received 126 likes, 6 likes on comments, and 4 comments (Figure 30) with a total engagement of 136, calculated by Netvizz.

Following, in order of active engagement, is *The Guardian* article shared by the administrator about a woman being arrested for attending a football match in Riyadh; the post received 56 likes, 9 comments, 9 replies to comments, and 1 like on comments, and a total of 41 shares, reaching a level of engagement of 115 (Figure 31). The last post to receive the highest level of engagement (116) is an article published on the Human Rights Watch website on December 2, 2014, and shared by the page administrator on the release of two women who were imprisoned for driving at the border of the United Arab Emirates. The shared post received a total of 77 likes, 3 comments, and 26 shares (Figure 32).

An important peculiarity that must be acknowledged is the presence of loose nodes that circle around the page graph (an example of loose nodes can be found in Figure 29, already analysed). After analysing them, they were identified as either posts on related topics or user's profiles

³⁵³ Support #Women2Drive Facebook page, "About". [Online]<
https://www.facebook.com/Women2Drive/info?tab=page_info>. Last accessed 2 January 2015.

(anonymous and numbered). One explanation I could find relates to the current Facebook “related links” and suggested pages feature (introduced in 2013) to train various algorithms to predict users’ behaviours and preferences. However, it still remains unclear why some nodes would be present without a link to a page that is intentionally built on relations and connections.

The second page I have analysed is *Saudi Women To Drive*. Following the same procedure, I used Netvizz to scrap the page with 999 randomly selected posts and visualised the interactions around them on Gephi using the Yifan Hu Proportional Layout. I then proceeded with the analysis of engagement figures and in-depth understanding of central nodes. The results can be found in Figure 33. As it is possible to see, the page is rather unique. It receives a total of 36,637 likes; however, the activity that happens on the page is different from the so-far discussed pages of groups, communities, initiatives, and organisations. As the figure shows, the interaction on the page is lively, constant, and the amount of shares and likes that posts receive are astounding.

The page is more active and dynamic than others; it has a “Donate” sub-page, and although the administrators publish most of the posts, there is an active community of users that share, like, and comment on almost every post. As for other pages, I have selected the “engagement” option from the ranking function on Gephi; on a colour scale from red (low engagement) to blue (high engagement), the graph shows the high level of engagement, given the predominance of greenish-blue nodes and the edges that connect them.

The overall network, at the time of this research, was made of 20,875, nodes and the initial scenario seemed rather confused; despite the attempts to distribute the network in clusters through the Yifan Hu Proportional layout, it was difficult to distinguish and analyse nodes’ singularity and generate clusters. It was therefore necessary to identify

central nodes enlarging the sizes of the nodes to 100 (under “ranking”), which were however many. The resulting network was therefore very *sui generis*, different from the other analysed pages. There are many highly engaged nodes amongst which the picture of a woman driving along with a link to a YouTube video (<http://www.youtube.com/user/oct26driving/videos>) part of the YouTube channel “Campaign 26 October” (الكتوبر 26 حملة), which currently has reached more than 5,892 subscribers, 193 videos, the most popular of which has received 1,021,004 views.³⁵⁴ This particular node (Figure 33) has received a total of 3,349 likes, 235 comments (2 replies), 297 likes on comments, and 1,590 shares.

The total level of engagement (which, it became clear during the research, coincides with the overall degree count) is 5,473. The second most relevant node is the satirical comment on a rule of the Saudi Religious Committee to allow women to ride bikes only if accompanied by a male guardian and dressed modestly (hence with impractical abayas). The post also contains a cartoon of a woman riding a bike in the abaya and a white-dressed male relative that emerges out of the backseat basket, like the genie of Aladdin. This post has received 1,063 likes, 177 comments, 46 replies to comments, 2,669 shares, and 340 likes on comments with a total engagement count of 4,295 (Figure 35).

The analysis of these pages highlights the emergence of the issue of the driving ban, and its emergence on the digital layer. The pictures of women at the steering wheel contribute to the construction and very same existence of an issue that touches upon several layers, that are political, economic and social. The gathering of digital objects on these analysed pages, I would also argue, plays an important part in the writing of an

³⁵⁴ The YouTube channel also links to the newly built website with the petition page, the Twitter profile that has reached 39,000 followers during the final stages of the research and contains more than 483 between shared videos and pictures. The authority of this particular account is growing and so is its cross-platform integration, through the #الكتوبر26_قيادة campaign hashtag.

account of Saudi women's battles for their rights in the country and highlights how the driving ban has other issues unconcealed, from the participation of women in the labour market to the strong social stratification of Saudi Arabia, where women are yet to be fully recognised their right to be considered full citizens.

5.4 Graphs' images and images

Figure 18: Gephi-structured dataset

Tab ID	A	B	C	D	E	F	G	H
	Source	Target	Relation	Issue	Type	Language		
ECWR_en	http://ecwronline.org/english/index.htm	https://www.facebook.com/ECWRonline	Directed	Women's Rights	Link	English		
ECWR_ar	http://www.ecwronline.org/arabic/index.htm	https://twitter.com/ECWREgypt	Directed	Women's Rights	Link	English and Arabic		
ECWR_ar	http://www.ecwronline.org/arabic/index.htm	https://twitter.com/ECWREgypt	Directed	Women's Rights	Link	English and Arabic		
ECWR_TW	https://twitter.com/ECWREgypt	http://arabic.euronews.net/2011/03/08/the-fight-for-women-s-rights-in-e	Directed	Women's Rights	Link	English and Arabic		
ECWR_en	http://ecwronline.org/english/index.htm	http://www.greenleft.org.au/node/46895	Directed	Women's Rights	Link	English and Arabic		
ECWR_ar	http://www.ecwronline.org/arabic/index.htm	http://www.ecwronline.org/english/index.htm	Directed	NA	Link	NA		
IHB	http://www.ihollaback.org/7s=Egypt	http://www.ecwronline.org/english/index.htm	Directed	Women's Rights	Link	English		
IHB	http://www.ihollaback.org/7s=Egypt	http://www.shorouknews.com/news/view.aspx?cdat=21082012&id=716	Directed	Anti-Harassment Initiative/Article	Article	Arabic		
IHB	http://www.ihollaback.org/7s=Egypt	http://www1.youtub7.com/News.asp?NewsID=761282&SecID=89&IssueID=	Directed	Anti-Harassment Initiative/Article	Article	Arabic		
IHB	http://www.ihollaback.org/7s=Egypt	http://www.youtube.com/watch?feature=player_embedded&v=CMYnU5F	Directed	Anti-Harassment Initiative/Link	Short Movie	Arabic		
IHB	http://www.ihollaback.org/7s=Egypt	http://harassmap.org/	Directed	Anti-Harassment Initiative/Link	Link	Arabic		
IHB	http://www.ihollaback.org/7s=Egypt	http://www.themovie678.com/	Directed	NOT FOUND	NA	NA		
IHB	http://www.ihollaback.org/7s=Egypt	http://english.ahram.org.eg/NewsContent/1/64/56273/Egypt/Politics-/Eg	Directed	Anti-Harassment Legal Proj	Article	English		
IHB	http://www.ihollaback.org/7s=Egypt	http://m.npr.org/news/Worid/164099058	Directed	Anti-Harassment Initiative/Article	Article	English		
NawalSadawi	http://www.nawalsaadawi.net/	http://www.nawalsaadawi.net/index.php?option=com_content&view=art	Directed	Women's Rights	Article	Arabic		
NawalSadawi	http://www.nawalsaadawi.net/	http://www.nawalsaadawi.net/index.php?option=com_content&view=art	Directed	Women's Rights	Article	Arabic		
NawalSadawi	http://www.nawalsaadawi.net/	http://www.guardian.co.uk/comments/free/Video/2011/jul/25/nawal-el-s	Directed	Egyptian Revolution	Video	Arabic		
NawalSadawi	http://www.nawalsaadawi.net/	http://www.nawalsaadawi.net/index.php?option=com_content&view=art	Directed	Nawal Al Sadawi	Article	English		
NawalSadawi	http://www.nawalsaadawi.net/index.pl	http://www.guardian.co.uk/comments/free/2011/apr/26/egypt-elite-still	Directed	Egyptian Revolution (Post)	Article	English		
NawalSadawi	http://www.nawalsaadawi.net/	http://www.nawalsaadawi.net/index.php?option=com_content&view=art	Directed	Egyptian Revolution (Post)	Article	Arabic		
NawalSadawi	http://www.nawalsaadawi.net/	http://www.nawalsaadawi.net/index.php?option=com_content&view=art	Directed	Egyptian Revolution (Post)	Article	English		
NawalSadawi	http://www.nawalsaadawi.net/	http://www.nawalsaadawi.net/index.php?option=com_content&view=art	Directed	Egyptian Revolution (Post)	Article	Arabic		
NawalSadawi	http://www.nawalsaadawi.net/	http://www.nawalsaadawi.net/index.php?option=com_content&view=art	Directed	Egyptian Revolution (Post)	Article	Arabic		
NawalSadawi	http://www.nawalsaadawi.net/	https://www.facebook.com/groups/58894959981/	Directed	Religious Fanaticism	Release	English		
NawalSadawi	http://www.nawalsaadawi.net/	http://www.pen.org/viewmedia.php/prmID/1831	Directed	Women's Rights	Link	NA		
NawalSadawi	http://www.nawalsaadawi.net/	http://www.youtube.com/watch?v=m9WGarcKx8U&feature=player_emb	Directed	NOT FOUND	NA	NA		
NawalSadawi	http://www.nawalsaadawi.net/	http://www.nawalsaadawi.net/index.php?option=com_content&view=art	Directed	Women's Rights	Video	English and Arabic		
NawalSadawi	http://www.nawalsaadawi.net/	http://www.nawalsaadawi.net/index.php?option=com_content&view=art	Directed	Personal Thought	Post	Arabic		
NawalSadawi	http://www.nawalsaadawi.net/	http://www.nawalsaadawi.net/index.php?option=com_content&view=art	Directed	Separation Religion/State	Post	Arabic		
NawalSadawi	http://www.nawalsaadawi.net/	http://www.nawalsaadawi.net/index.php?option=com_content&view=art	Directed	Misc	Release	Arabic		
NawalSadawi	http://www.nawalsaadawi.net/index.pl	http://www.youtub7.com/News.asp?NewsID=139817	Directed	Misc	Report	Arabic		
NawalSadawi	http://www.nawalsaadawi.net/	http://www.nawalsaadawi.net/index.php?option=com_content&view=art	Directed	Misc	Report	Arabic		
NawalSadawi	http://www.nawalsaadawi.net/index.pl	http://today.almasryayoum.com/article2.aspx?ArticleID=227342	Directed	Misc	Statement	Arabic		
NawalSadawi	http://www.nawalsaadawi.net/	http://www.nawalsaadawi.net/index.php?option=com_content&view=art	Directed	Personal Thought	Post	English		
NawalSadawi	http://www.nawalsaadawi.net/	http://www.nawalsaadawi.net/index.php?option=com_content&view=art	Directed	Personal Thought	Post	Arabic		
NawalSadawi	http://www.nawalsaadawi.net/	http://www.nawalsaadawi.net/index.php?option=com_content&view=art	Directed	Personal Thought	Post	Arabic		
NawalSadawi	http://www.nawalsaadawi.net/	http://www.nawalsaadawi.net/index.php?option=com_content&view=art	Directed	Personal Thought	Post	Arabic		



Figure 20: Women's Issues Network, Egypt (in-degree)

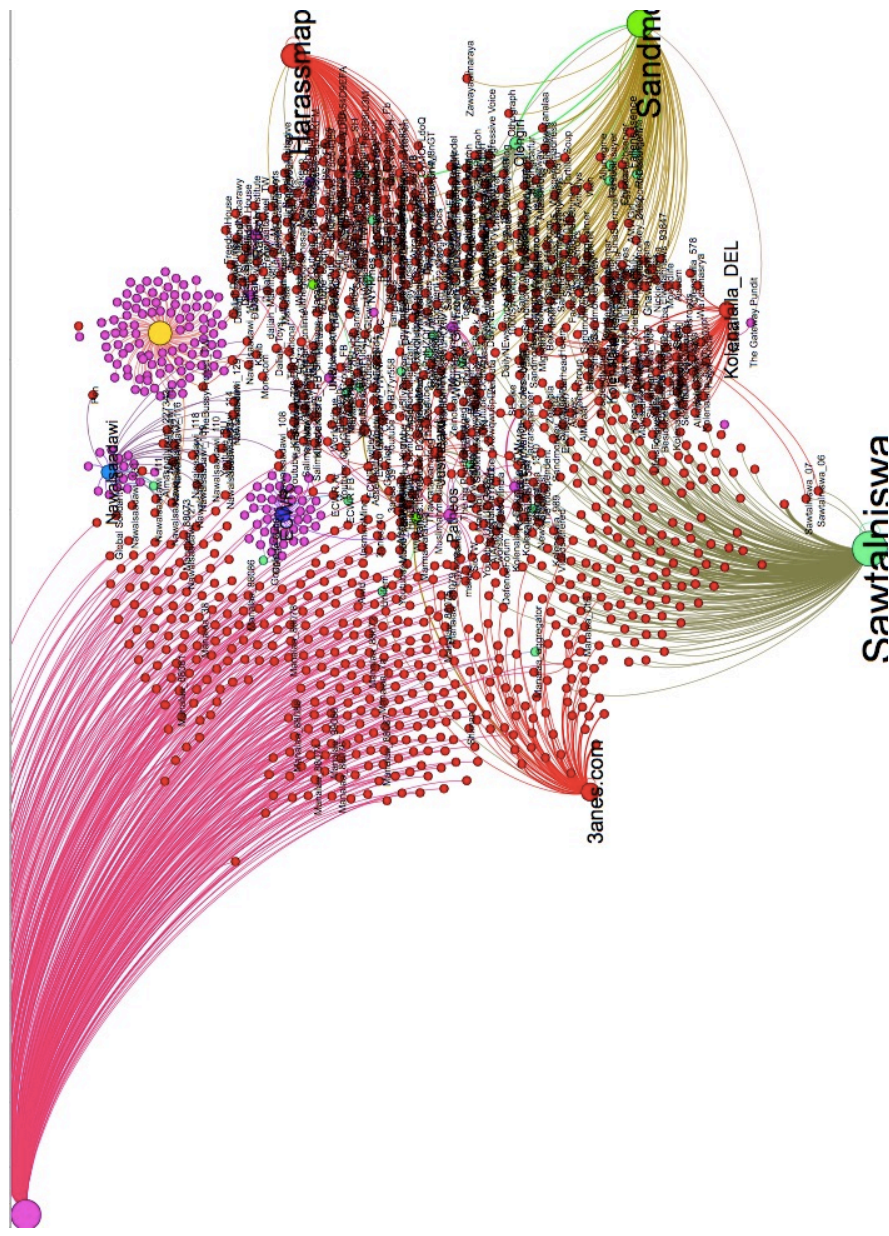


Figure 21: *Egypt, Women's Issues Network, total engagement*

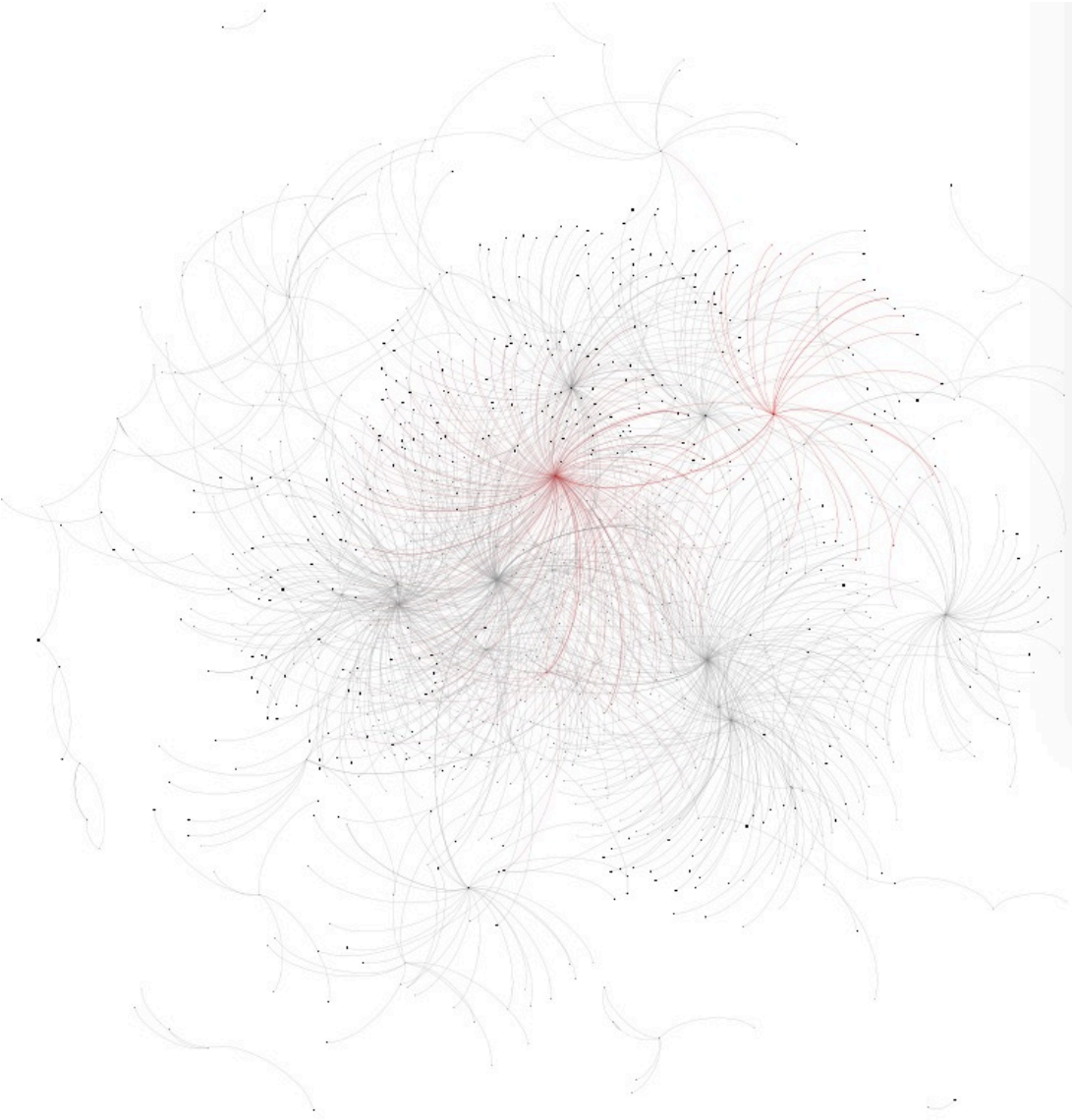


Figure 22: *Egyptians Against Sexual Harassment, Facebook page, Engagement*

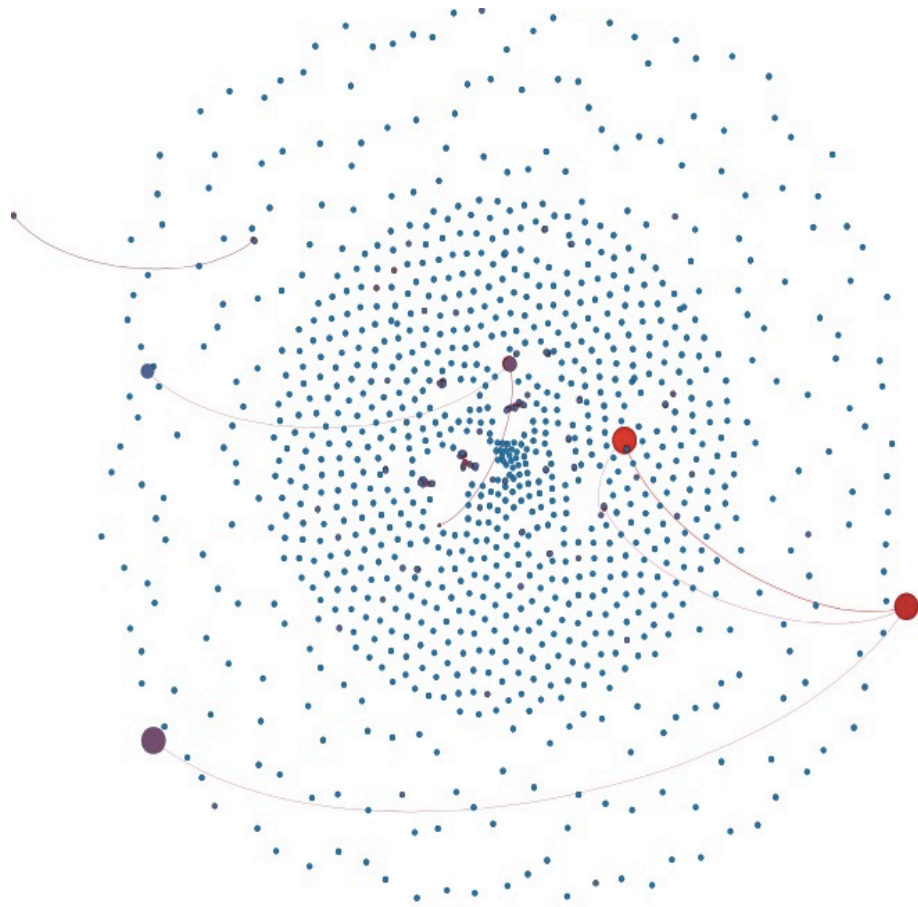


Figure 23: *Harassmap, Facebook page, Engagement*

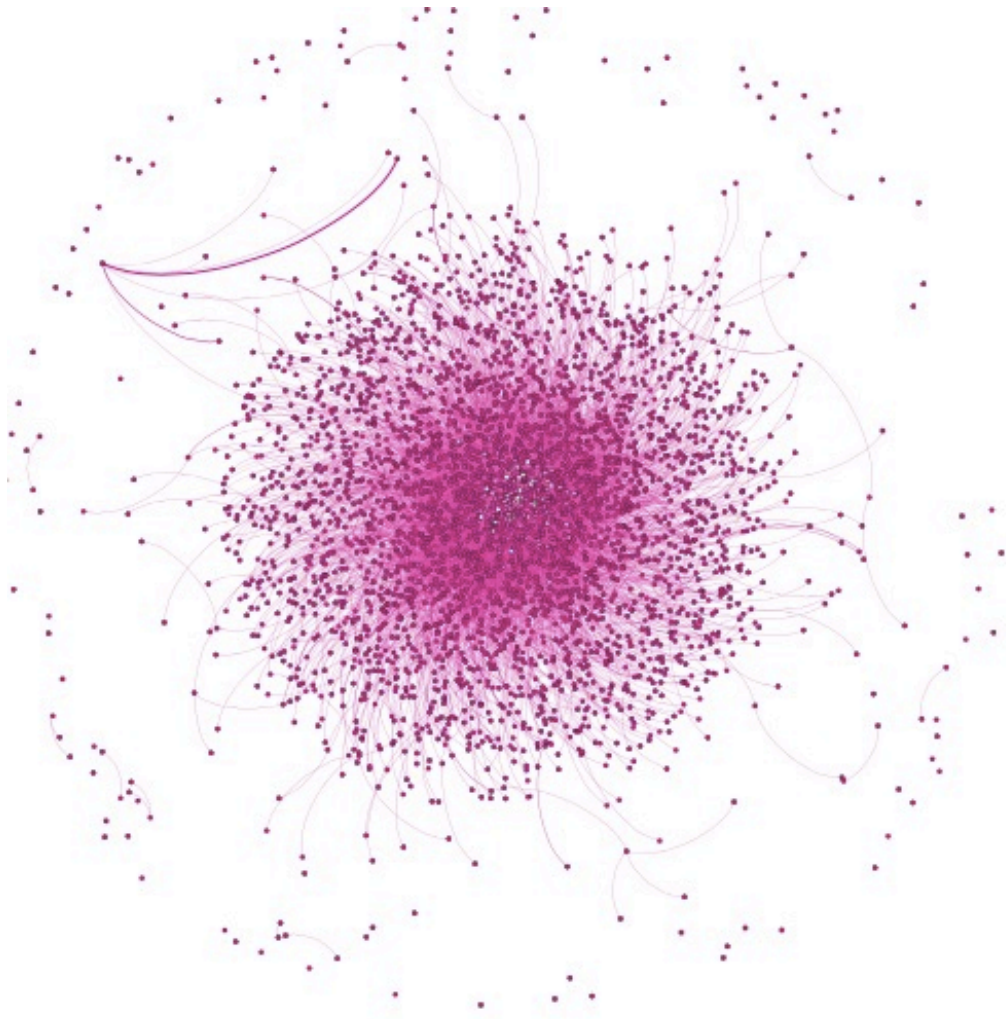


Figure 24: *Op Anti-Sexual Harassment/Assault in Egypt, Facebook page, Engagement*

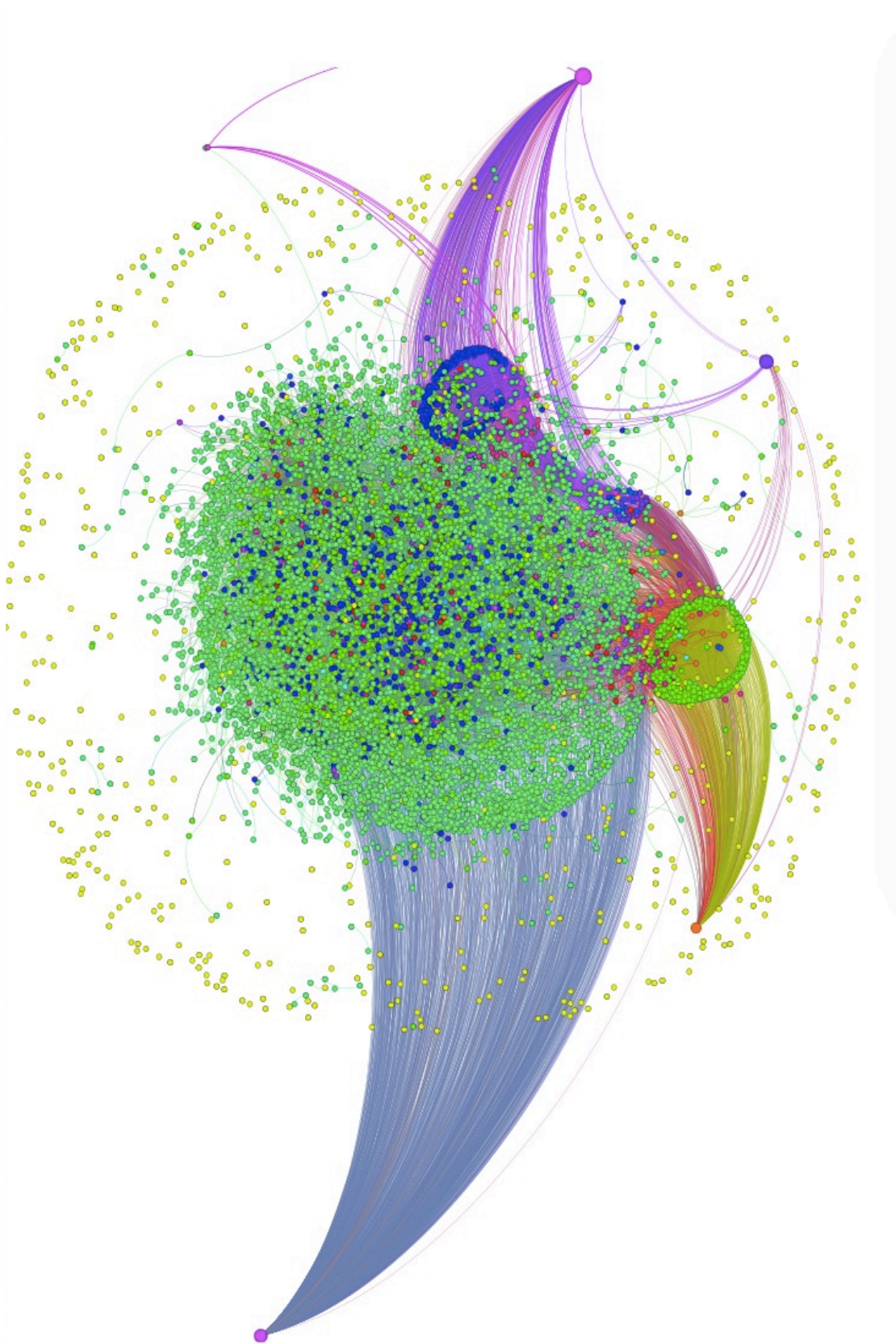


Figure 25: *Ta7rosh*, Facebook Page, Close nodes visualisation

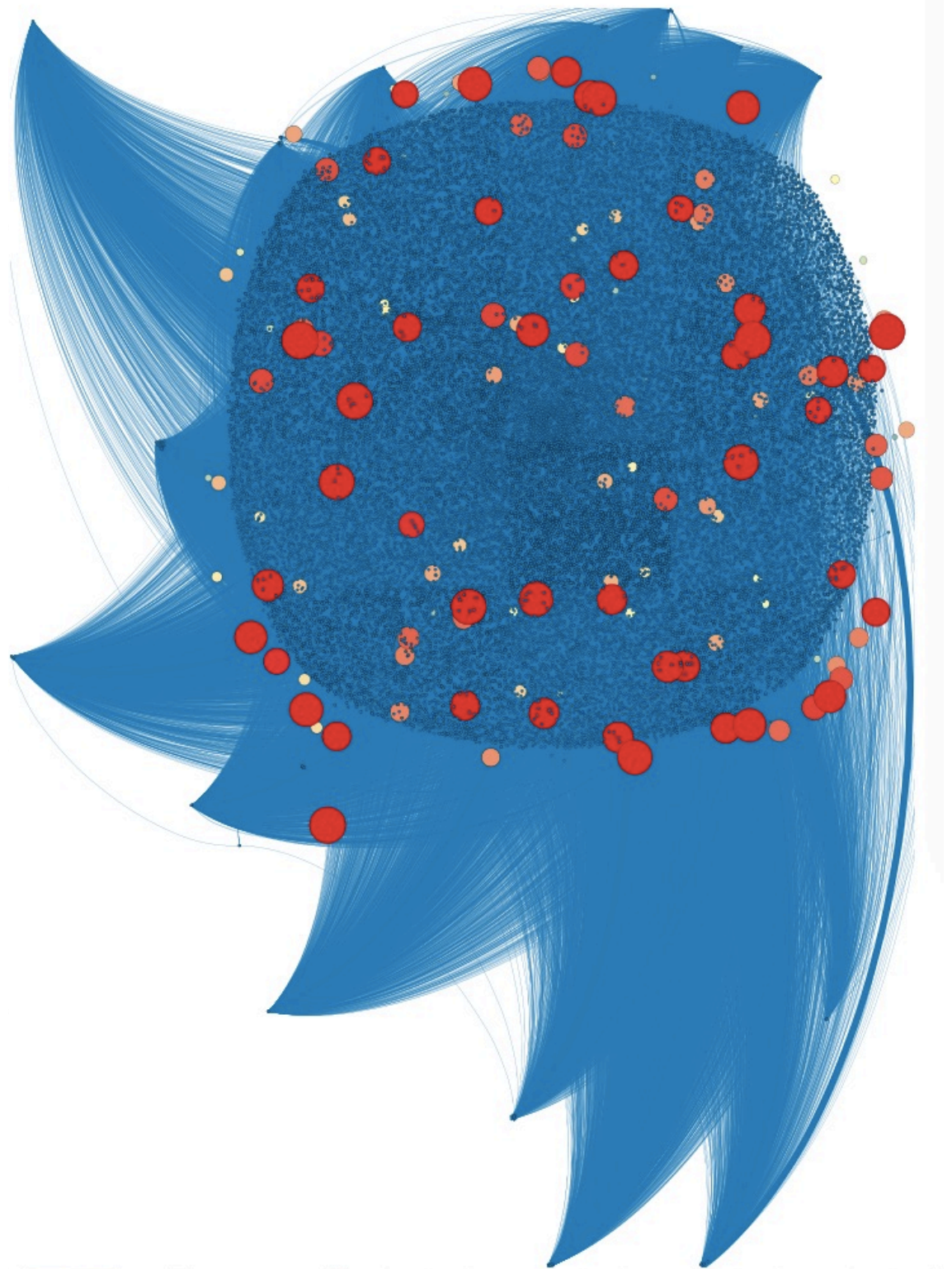


Figure 26: Saudi Arabia, Women's issues list

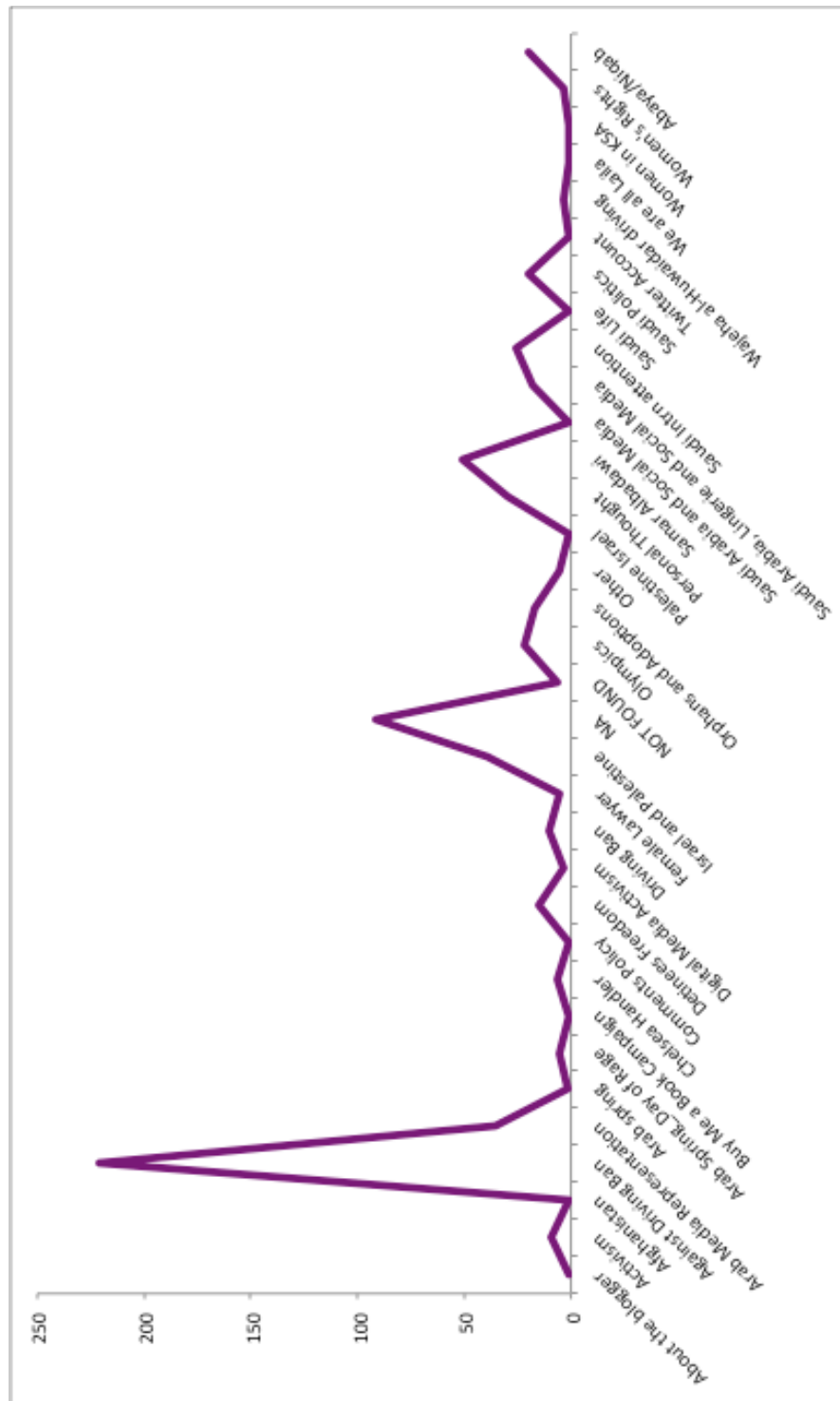


Figure 27: *Saudi Arabia, Women's issues Network*

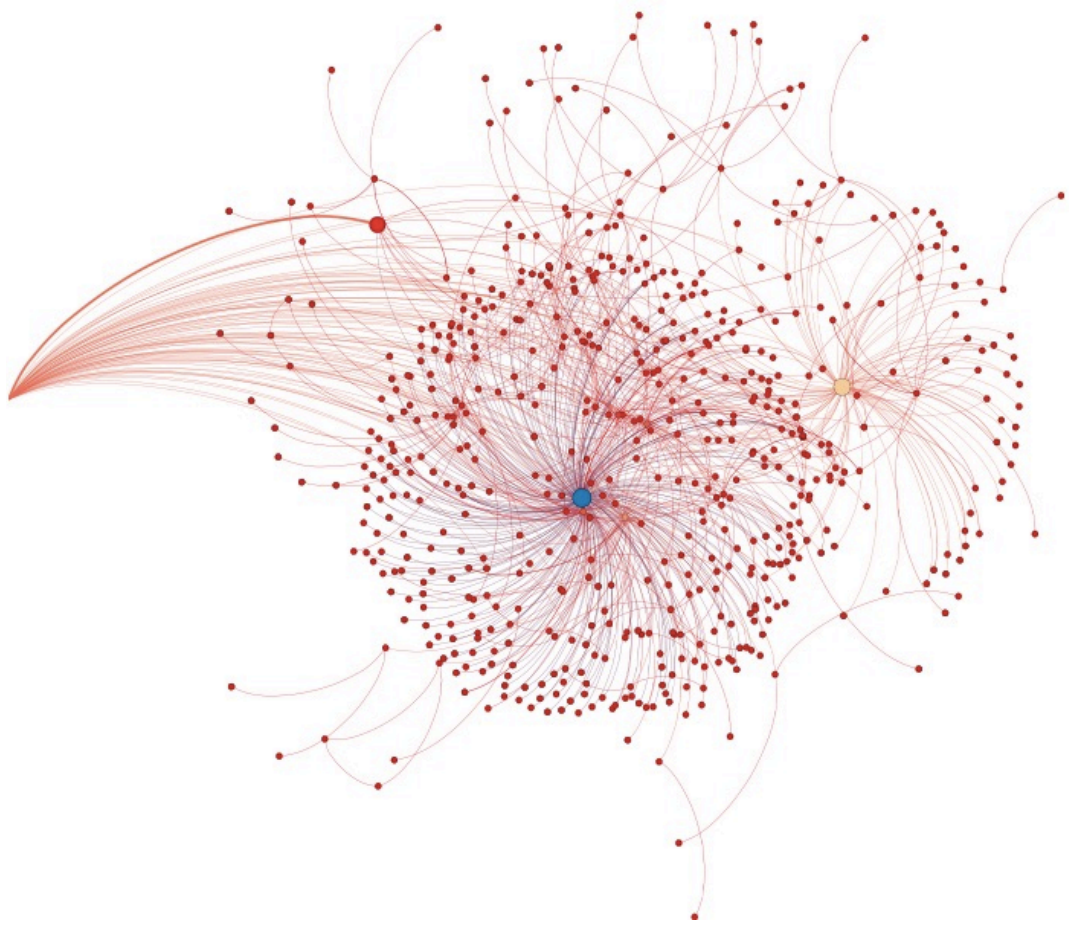


Figure 28: Saudi Arabia, Women's issues, Language

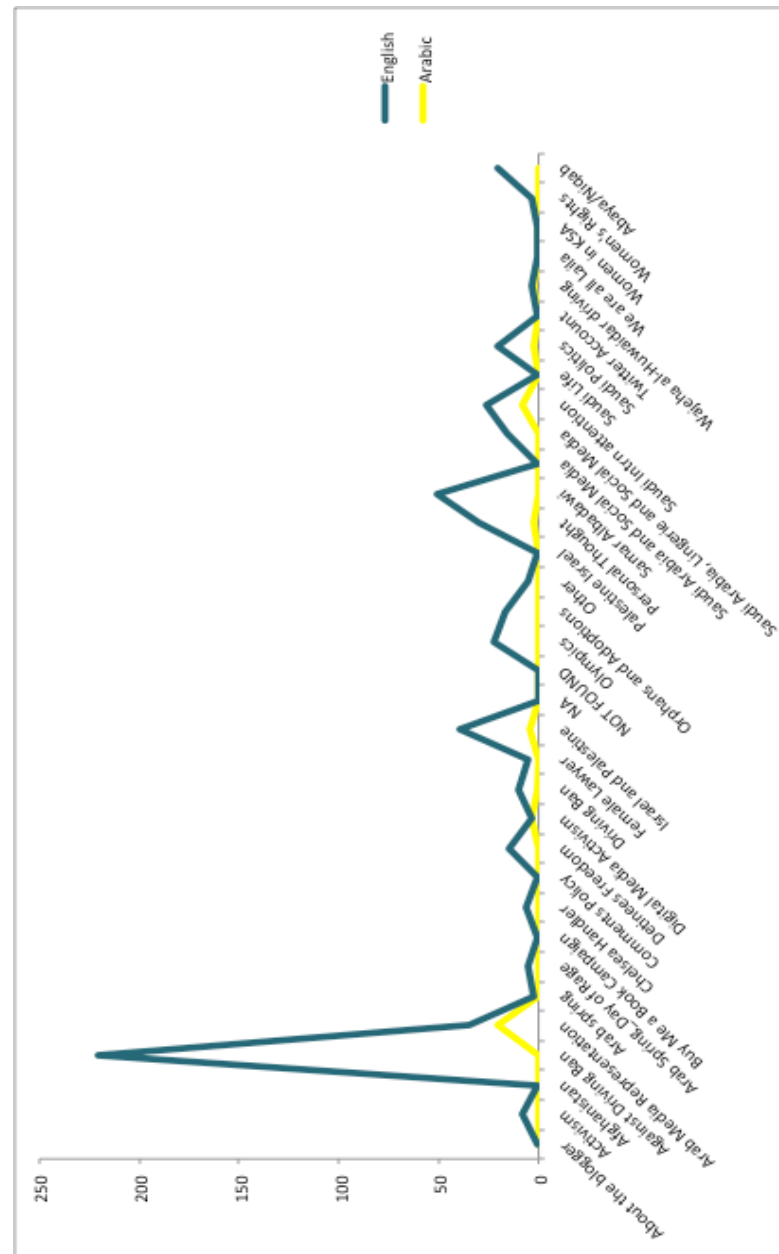


Figure 29: *Support #Women 2 Drive, Facebook page, Engagement*



Figure 30: Support #Women2Drive most popular post

**Support #Women2Drive** shared **Half the Sky** by Nicholas Kristof and Sheryl WuDunn's photo.

October 30, 2014 · 🌐

Please Share:



Half the Sky by Nicholas Kristof and Sheryl WuDunn

Activists in Saudi Arabia are revving up a national right-to-drive campaign and encouraging Saudi women to post pictures of themselves behind the wheel on social media using the hashtag **#IWillDriveMyself**.

An online petition asking the government to "lift the ban on women driving" garnered more than 2,400 signatures ahead of its culmination date, October 26. The petition states, "the issue is not that of simply a vehicle driven by a woman, but the acknowledgement and recognition of the humanity of half of society and the God-given rights of women."

The petition website features an "honor wall" naming 108 women who have defied the kingdom's driving ban.

Read more via **Business Insider**: <http://read.bi/1uGkXA2>

Like · Comment · Share

👍 128 people like this.

Figure 31: *Second most popular post, Support #Women2Drive, Facebook page*

**Support #Women2Drive**
December 16, 2014 at 12:11pm · 

Saudi female arrested for going to a football match.



Saudi woman arrested for attending football match in Riyadh
Woman says she did not know women were prohibited from football stadiums, which are male only in Saudi Arabia
WWW.THEGUARDIAN.COM

[Like](#) · [Comment](#) · [Share](#)

 56 people like this.

 41 shares

Figure 32: Third most popular post, Support #Women2Drive, Facebook page

**Support #Women2Drive**
December 4, 2014 · 🌐

Saudi authorities detain 2 Saudi women, 1 of whom tried to drive a car across border from UAE <http://t.co/qKoMN3USOG>
<http://t.co/yfERfmDbQy> #LoujainHathloul



Saudi Arabia: Release Women Driving Activists | Human Rights Watch
(Beirut) – Saudi authorities detained two women on the Saudi side of the border with the United Arab Emirates on December 1, one of whom tried to...
HRW.ORG

Like · Comment · Share

👍 81 people like this.

↪️ 23 shares

Figure 33: *Support #Women2Drive, Facebook page, Engagement*



Figure 34: *Saudi Women To Drive, most popular post*

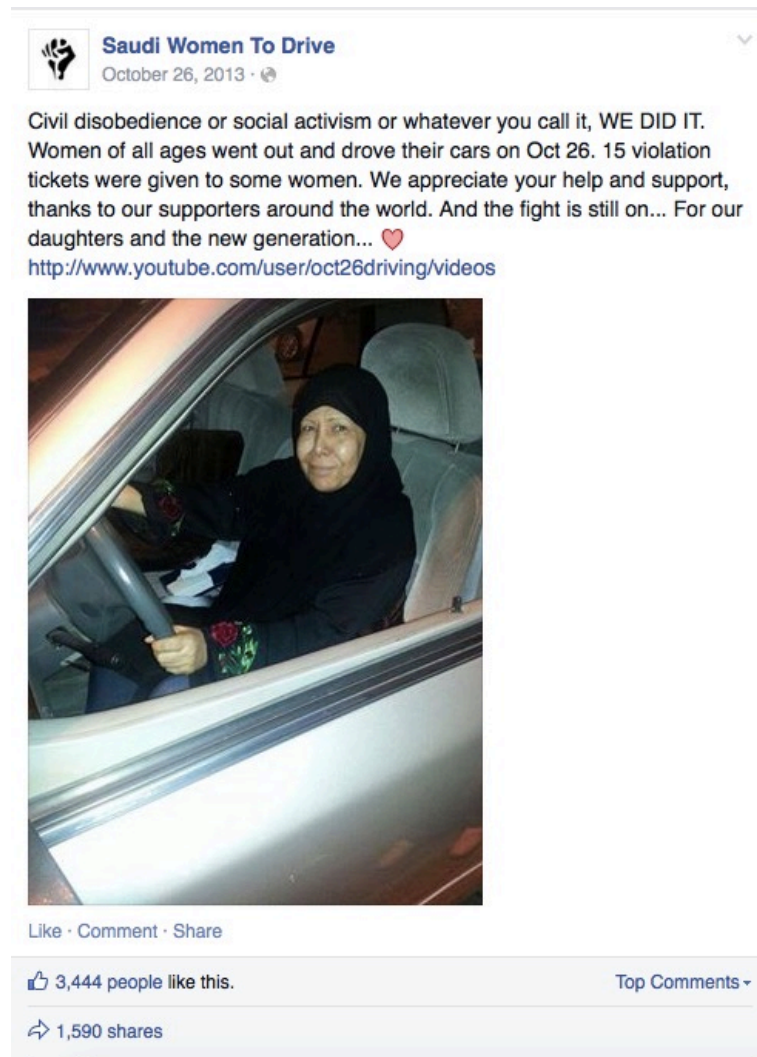


Figure 35: *Saudi Women to Drive*, second most popular post



5.5 Twitter and the temporary dimension of (some) women's issues

This last part of the chapter will discuss an aspect that has emerged during the research, or the temporary dimension of women's issues, already introduced with the discussion on the campaign on the lingerie shops boycott, as well as in the thesis' Introduction.

In the Introduction I discussed the peculiarity of the issue in computing management, or its different degrees of importance and its temporal characteristic. This section will especially reflect on the temporary dimension of some issues—either in the form of organised campaigns or in the form of topics of discussion and criticism—on Twitter. I will do so through the analysis of two Twitter hashtag (#) campaigns, the *#MeshSakta* (don't be silent) campaign organised by Harassmap, and the *#Women2Drive* campaign against the driving ban in Saudi Arabia, the latter which was originally organised in support of the 17th June 2011 driving protest and soon become a repository of information, pictures, and videos of women in the Kingdom driving, sharing scanned versions of old driving licenses issued to women in the 1970s, and a dynamic 'place'—and an extension of the multi-layered and networked map in terms of both time and space—where debates over the mundane nature of the driving ban and its political weight have taken place. I will take these particular aspects into consideration to highlight issues with regard to tracking, recording, and archiving tweets and short links and reflect on the temporary dimension that issues might acquire on Twitter. I will also briefly reflect on the important role of the practice of archiving tweets, which is, to date, only possible for up to two years.

I will discuss the procedure followed to gather data on the *#MeshSakta* campaign from 1st March until 18th April 2014. For this campaign I used the proprietary tool Twitonomy. I will then discuss the

#Women2Drive in Saudi Arabia since its first tweet (according to Twitter the account was opened 6th May, 2011) until 13th May 2014, for which I manually collected the tweets, given its relevance to the issue of the driving ban.

5.5.1 #MeshSakta campaign in Egypt

The #MeshSakta campaign was launched by Harassmap in February 2013 with the goal to inspire women and to report their cases of sexual harassment. The campaign was launched on Facebook and Twitter, among other platforms I was not directly involved with, including community outreach activities and merchandising.³⁵⁵ I covered and analysed one week of tweets through the proprietary tool Twitonomy³⁵⁶ and recorded 266,120 views of tweets and 721 retweets and comments. The most retweeted post has the message of the campaign that invited victims (or witnesses) of harassment to text their stories to 6069 or report it on Harassmap.org and stop being silent (Figure 36).

Figure 36, Twitter Mesh Sakta Campaign, most popular tweet



³⁵⁵ The organisation produced bags and t-shirts and organized open seminars and awareness campaigns to raise awareness the public about the importance of reporting harassment and, to the victims, to report their cases too.

³⁵⁶ www.twitonomy.com; media agencies can have access through a yearly fee; it is also possible to have a one-month access for 19USD. For this specific case, I used the corporate account.

The second most retweeted post was that of Harassmap's invitation to not let harassers go unpunished and report cases of harassment on the organisation's reporting system on their website (<http://harassmap.org/ar/submit-a-report/>). These two tweets were then followed by awareness messages that were always posted by the account @harassmap.

Links and short links embedded in tweets and retweets were those to the Harassmap reporting page and the Harassmap page dedicated to the *Mesh Sakta* campaign.³⁵⁷ Although the results were focused on one week of monitoring, I kept following the page and noticed that the tweeting activity slowed down, with an average of two posts per day in May 2014, and then a post per day carrying the hashtag # “مَش سَاكْتَة.” The activity kept slowing down in June 2014, with one post on June 11, one on June 20, one post on July 27, one on October 21, and one on November 7 of the same year. Finally, the last one, containing a Google doc version of the reporting template, was on December 28. Throughout this time, the most active user had been the @harassmap account and the most relevant link is to a Facebook picture,³⁵⁸ carrying one of the campaigns' message (also used on billboards in Cairo).

³⁵⁷ For a reference to the page, follow the link <http://harassmap.org/en/harassmaps-dont-be-silent-campaign-takes-off/>

³⁵⁸ <https://www.facebook.com/photo.php?fbid=752832878122021>

Figure 37: Mesh Sakta campaign latest posts



5.5.2 #Women2Drive Saudi Arabia

I analysed the *#Women2Drive* and reported the Twitter activity through Twitonomy for two specific timelines (coinciding with the launch of the online magazine *Women2Drive* and with a peak in the discussion about the driving ban).³⁵⁹ The specific timeline I analysed goes from February 10, to February 17, 2014, and then from April 3 to April 10, 2014. However, I have also compiled a data set of all tweets dating back to the origin of the campaign, which was May 6, 2011 according to Twitter.³⁶⁰

The principal goal of this analysis was to understand the ways in which the issue of the driving ban was being discussed, the main actants that emerged, and how the issue of the driving ban emerged. Contrary to the *Mesh Sakta* campaign that was mainly focused on the message published by Harassmap, *#Women2Drive* reveals different discussions and several actants. In particular, the Twitonomy dataset recorded a total of 1,612 retweets, conversations, and comments from February 10 to 17 and a total of 1,520 retweets, conversations, and comments from April 3 to 10. In both periods of time, two posts received the highest number of retweets and comments; the first is a post by Fahad Albutahiri³⁶¹ that received 562 retweets and 113 favourites; interestingly enough, the tweet was first shared on May 23, 2011. The tweet generated interest because of the link to an external Twitter picture page (twitpic) of a driving licence issues to a woman in 1984 (year 1404 of the Hijri calendar).

³⁵⁹ The magazine was launched using the paper.li platform but it has since been discontinued; the heated debate in April led to some women driving as a form of protest at the end of April and one woman being imprisoned and sentenced to 150 lashes. The sentence was later overturned. The Clarion Project. "Woman in Saudi Arabia sentenced for Driving". 28 April, 2014 [Online] <<http://www.clarionproject.org/news/woman-saudi-arabia-sentenced-150-lashes-driving>>. Last accessed 15 January 2015.

³⁶⁰ The full dataset manually compiled can be found on my website www.oxycoms.com/clb/Tools.

³⁶¹ <https://twitter.com/Fahad/status/72653697057964032>

The second most retweeted post is the YouTube video of a Saudi woman driving. Her video went viral because of the song used in the background “It’s My Life” by the band Bon Jovi. The video was embedded in a post (Figure 36) published by twitter user “Fahad Albutairi” and received a total of 562 retweets and 113 favourites. The post links to the campaign # but also, externally, to the YouTube video, originally uploaded on the campaign’s YouTube Channel on May, 22, 2011.³⁶² The campaign on Twitter shows an active participation, which seems to collate a colourful and diverse story of women’s activities and, in some ways, activism in the country. Twitter becomes the common ground for women to take action and disagree with the country’s conventions. However, Twitter becomes also a repository of information about the driving ban, its localized and peculiar existence through personal stories that are usually translated into short links, and whose resonance can be understood by the numerical values of retweets, favourites and replies.

These two examples can be a way of understanding the multiple ways in which the technological, political, and the social layers intertwine, contributing to the emergence of the issues of harassment and the driving ban. However, they also corroborate the temporary dimension of some issues or, as in the case of the # *MeshSakta* campaign, some aspects of an issue; the Harassmap-sponsored campaign has shown how engagement on a specific topic emerges, reaches a peak but then, almost organically, decreases, leading to low engagement that—in this case—coincided with the end of the awareness campaign. However, an aspect that the Twitter analysis has brought to life is the amount of information left on Twitter with regard to Harassmap as an organisation that engages with the community, sexual harassment as a social plague, and the campaign as a way of connecting and—to some extent—reiterated in how the many layers that co-create a specific issue emerge and enmesh into each other; the

³⁶² <http://www.youtube.com/watch?v=vzvo6dOGPbU&feature=youtu.be>

campaigns (#) are digital in which they emerge through fractional updates that contribute to their existence; they acquire an important political and social role in which they try to engage with individuals and with the issues of harassment and the driving ban. The multi-layered and networked map is therefore enriched by yet new actants; at the same time, the temporary dimension of abandoned conversations somehow alters the map itself. Although not updated, conversations, tweets and the interactions happened through a specific # and become data and part of an archive of stories and accounts of women's issues in Egypt and Saudi Arabia.

5.6 Conclusions

This chapter has presented the results of an analysis of women's issues as they emerge on the digital layer. I have explained the choice of using an issue-oriented dataset, resulting from the literature review and discussion presented in previous chapters. Through the combined use of Gephi and Netvizz and the transition of most of the content analysed from blogs and forums to Facebook and Twitter, I have discussed how the research has shifted the focus on the interactions on these two platforms. I have explained and discussed how the research has therefore entered a new stage. If at the beginning of the research, the main preoccupation was to scrape online platforms in search of hyperlinks with the aim to understand the links between activists and their discussions, the lack of information on the Egyptian women's issues network led me to a second stage, focused more toward an object-oriented research, that started to combine hyperlink analysis and qualitative evaluation of digital objects, in the form of videos, campaigns, newspaper articles, and pictures.

The second stage of the research and the increased usage of Facebook and Twitter led to the choice to 'funnel' the analysis of women's

issues. In fact due to the technical constraints of the two platforms³⁶³ and the amount of content and the frequency with which it is published led me to move the focus of my investigation; in fact my analysis went from following the issues, and the ways in which they emerged and were discussed –that also included following how they were discussed on different platforms and the various digital objects that contributed to their existence- to investigating specific pages, accounts and campaigns available on these two platforms. I therefore moved from an analysis of women’s issues to a more qualitative analysis of the discussions happening on specific pages, selected on the basis of the received likes.

As for Twitter, I have chosen specifically one campaign organised by Harassmap during my collaboration with them, and the #Women2Drive, which is –to date- the most active Twitter campaign on the topic in Saudi Arabia. This choice has important consequences; the quantitative analysis executed through Gephi and Netvizz raised questions with regard to the qualitative aspect of a research into technowomen as emerging online and the need to better understand how conversations, blogs, and crowd-sourced activities must be looked at also in light of this qualitative aspect. This aspect will be further investigated through the case of Harassmap in the next chapter, where the intrinsic complexity of technowomen will be presented.

The chapter has offered examples of how technowomen emerge from, for example, APIs and embedded links or digital objects embedded in posts and the human action of posting, sharing, discussing, and debating certain issues. The case studies of *We are all Laila*, the *BussyProject*, but also data analysed and visualised in relation to posts, tweets, and levels of engagement could potentially lead to consider how technowomen acquire a

³⁶³ As previously highlighted, it is rather difficult to extract historical Twitter data; I have used Twitonomy and investigated other tools but retrieving data older than two weeks is still a challenge. It is also important to notice that I couldn’t extract Facebook data despite the many options that can be found on the Facebook Developers site.

spatial and temporary dimension—spatial because they emerge out of issues discussed and through an assemblage of technical and human agencies, through digital objects that cannot prescind from a reflection on software and coding practices (this aspect will be better explained in the next chapter). They are also temporary because, as in the cases of Facebook engagement and Twitter # have presented, one of the characteristics of issues as they emerge online is the possibility to appear, disappear, change their initial scope and –as in the case of #MeshSakta, can have a specific –temporary- objective. However, I have also pointed out the important archival inputs that this temporary characteristic raises, especially given the limited responses of available tools for data mining.

The next chapter will discuss some of these aspects in details through the case study of Harassmap, where I will further expand on the concept of technowomen, the social impact of software, and try to expand on the increasing importance of data archive and retrieval practices as contributing elements to a more complete approach to women and gender studies and reflections on digital media.

Chapter 6: Harassmap: Technowomen and societal acceptance of sexual harassment in Egypt

6.1 Introduction

In this last chapter I will analyse the case of Harassmap, an independent organisation created in 2010 and whose focus is to denounce and tackle cases of sexual harassment in Egypt. I will argue that Harassmap presents a complex reality by simultaneously being an organisation, a crowdsourced map and a set of coding practices that allow personal stories to find visibility. Correspondingly, stories and reports combine, aggregate and emerge in parallel with the technical and technological side of coding, algorithms and ASCII codes. Sexual harassment has emerged as central in the Egyptian women's issues network. As the research has highlighted and discussed, women's organisations, independent movements and grass-root associations have tried to relentlessly catch the attention of policy makers through statistical data and reports, the most important one being "Clouds in Egypt Sky."³⁶⁴

Social Media platforms, as analysed above, have also offered a space for the discussion of the issue. Digital analysis of blogs, Facebook pages and groups, and Twitter hashtags (#) has revealed an active audience that discusses their own experiences of sexual harassment and tackles the problem in different ways, from awareness campaigns to vigilante acts. In 2013 a Reuters report deemed Egypt the "worst country to be a woman,"³⁶⁵

³⁶⁴ In 2008, this report was promoted by The Egyptian Centre for Women's Rights (ECWR), a women's organization based in Egypt, with a small contribution of the European Union. The document was published in 2010 by the UNFPA. Available at: <http://egypt.unfpa.org/english/publication/6eeeb05a-3040-42d2-9e1c-2bd2e1ac8cac>.

³⁶⁵ "Egypt 'Worst for Women' Out of 22 Countries in Arab World". *BBC News Middle East*. 12 November 2013.[Online]. Available at: <www.youtube.com/watch?v=jePvXFz4XDc>. Last accessed 21 March 2015.

and the United Nations responded with a public service announcement entitled “Put Yourself in Her Shoes,”³⁶⁶ which circulated widely on TV and through social media. The “localised” analysis of Egyptian platforms and blogosphere that this research has put forward reveals a long and much debated problem. However, it was not until the Egyptian Revolution in 2011, especially after US journalist Lara Logan was sexually assaulted while covering the protests, that many of the problems came to light.

Since the 2011 Egyptian Revolution, groups of men have also started campaigning to protect women against sexual harassment. Many such groups –as seen in the previous chapter- have made use of Twitter, mainly through hashtags (#), and have become popular and extremely active. It is worthwhile mentioning the cases of Tahrir Bodyguards (especially active after September 2013), Op Anti-Sexual Harassment (OpAntiSH already analysed), Shoft Ta7arosh (I Saw Harassment, already part of the research through the analysis of the Facebook Page) and Nazra.³⁶⁷ These organisations are linked one way or another to Harassmap, and all of them have done important work to tackle sexual harassment and end the acceptability of societal practices that dismiss it on the basis of religion or culture.

Harassmap is a digital map very much like those widely used on common websites to pinpoint a location for a business or organisation. However, beneath the surface, Harassmap is re-writing the entire idea of the map and, most importantly, that of directionality and offering new spaces of reflection on the issue of harassment in the country. Therefore,

³⁶⁶ “Put Yourself in Her Shoes”, *UN Women*. Public Service Announcement published on YouTube. 2013. 1:16. Posted by UN Women. 9 December 2013.[Online]. Available at: <www.youtube.com/watch?v=jePvXFz4XDc>. Last accessed 21 March 2015.

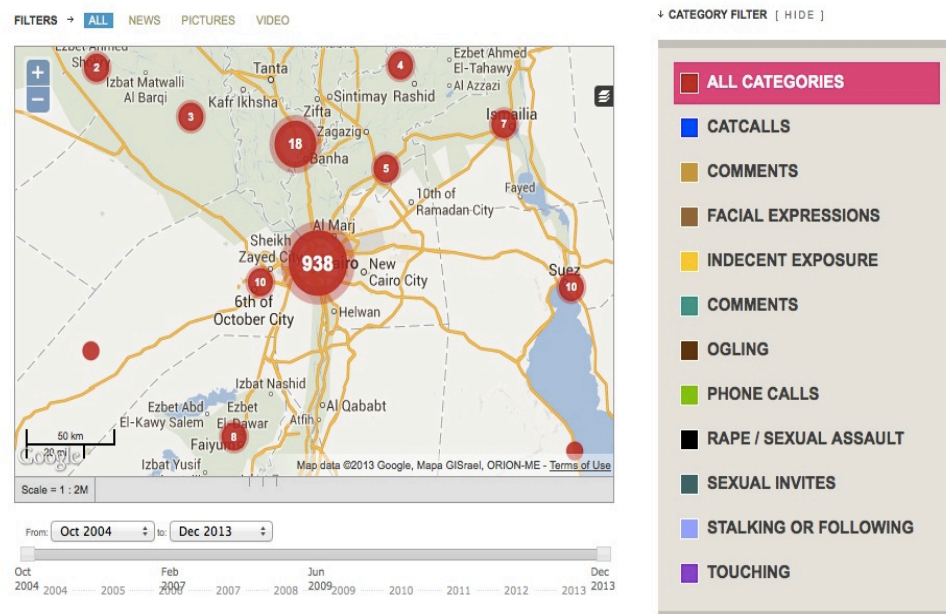
³⁶⁷ The Tahrir Bodyguards were born during the Revolution in 2011 to protect women from unwanted attention, sexual harassment and assaults. The bodyguards are usually made of small groups of men volunteers that escort women in the street, during public gatherings or street demonstrations. Hume, Tim. “Tahrir bodyguards fight ‘to cure Egypt’s disease.’” CNN, 6 March 2013. [Online]. Available at <<http://edition.cnn.com/2013/03/05/world/meast/tahrir-bodyguard-egypt-assaults/>>. Last accessed 11 July 2015.

some of the questions that are to be asked concern the ways Harassmap is, at once, a node in the greater network of women's issues in the country and a network itself, bringing together offline and online experiences, activities, and actions. Harassmap, I will argue, enriches and further expands technowomen, touching upon cartography and semiotics of the maps. The aim is to highlight how an analysis of the digital contribution to feminist discourses and women's movements and activities can neither ignore nor neglect the pervasive impact of code in any reflection on computational culture

6.2 Harassmap: The organisation and the map

Harassmap was born to respond to the social acceptability of sexual harassment in Egypt. Founded by Rebecca Chiao, it sought to create a grassroots movement to report cases of sexual harassment in the country. Originally created as a website and an organisation, Harassmap developed into a map in 2010. In this embodiment, the map was based on an open source platform called Ushahidi, which allows real time reporting through a mash up of Google Maps, SMS text messages, mobile apps, and an online public noticeboard.

Figure 38: *Harassmap, The Map* [www.harassmap.com]



Harassmap is built on Google Maps and works via Google Maps API, a service entirely coded in JavaScript and XML.³⁶⁸ The site, available in English and in Arabic, has been defined as “an interactive tool” whose aim is to “crowdsource harassment,”³⁶⁹ or to report and share personal stories of sexual harassment and assault in Egypt. Women and men who have been sexually harassed can report their experiences by posting on the website, sending an SMS message, or email and, with the advent of social networking sites, information can now be added in real time via Twitter and Facebook.³⁷⁰ These stories are then checked out by a group of volunteers

³⁶⁸ Madrigal, Alexis C. “How Google Builds its Maps and What it Means for the Future of Everything”. *The Atlantic*. 6 September 2012. [Online]. Available at: <<http://www.theatlantic.com/technology/archive/2012/09/how-google-builds-its-maps-and-what-it-means-for-the-future-of-everything/261913/>>. Last accessed 21 March 2015.

³⁶⁹ “Towards a Safer City – Sexual Harassment in Greater Cairo: The effectiveness of Crowdsourced Data”. Report Published by *Harassmap*. [Online]. Available at: <<http://harassmap.org/en/towards-a-safer-city-sexual-harassment-in-greater-cairo-the-effectiveness-of-crowdsourced-data-executive-summary/>>. Last accessed 21 March 2015.

³⁷⁰ In the cases of Twitter and Facebook, the story must then be reported on the website and it must be checked out, as well as reported to the police, in order for the incident to become a ‘red-dot’ on the map.

who attest to their veracity, and ensure that the report is represented correctly on the map. Additionally, the victim—who remains anonymous on the map and whose name is only shared with the police—is referred to organizations that offer legal support as well as psychological and medical assistance.

The story emerges through personal and anonymous reports; at the same time it becomes a visual marker, or a ‘red dot’ as it is referred to within Harassmap, similar to those found on Google Maps to specify a geographical location. In traditional mapping, the pointer represents a static location and symbolises directionality (from A to B). The many layers that, combined, create the map are specifically thought, and implemented, to help a user find a place, get directions, check route availability, and in some cases get GPS navigation to their destination.

Harassmap redefines all this: the pointer is an algorithmic formulation and translation of a personal story while the location is the spot where the event took place. This results in an aggregate of ‘red dots’ that usually become hot spots that women should avoid. Harassmap is more than a map; it is a reporting system and a way of increasing awareness about sexual harassment. In this sense, it not only documents incidents of harassment but also serves as a bulletin of hot spots that highlight instances of harassment.

Sexual harassment is put on the spotlight by promoting community engagement activities to fight a practice that would otherwise be taboo. The organization is therefore much more than a map, and the map itself reviews and regenerates the idea of crowdsourcing by prompting us to ask the question, is Harassmap made by people or by the stories? How does it feed into a broader discussion of women’s issues in Egypt as emerging on the digital layer? However, Harassmap also revisits the overall understanding

of carto-semiotics and any traditional idea associated with directionality, location, and symbolic meaning of a map pointer. Can Harassmap be considered a map of avoidance or is it an archive of stories, visually displayed on a map?

As can be seen, the questions that Harassmap raises are multiple and pertain to three different dimensions: the social dimension of the social acceptability of sexual harassment and women's blaming, crowdsourcing and grass root movements, and questions to the world of cartosemiotics, or the semiotics of the map. These three dimensions, and the corresponding questions, will be addressed.

6.3 The socio-technological dimension of sexual harassment

Over the course of the years Harassmap has received much praise, including being seen as a "crowdsourced peace-builder."³⁷¹ In great part this success is due to its founder, Rebecca Chiao, and a dedicated team of volunteers that perform a large number of duties ranging from maintaining the map to supporting fundraising activities. Because of these efforts, the popularity of the map has spread. For example, a very similar application has appeared in India. This version of the map, also called Harassmap, has a mobile application that allows reports of incidents to be updated (and uploaded) instantly.

Noora Flinkman, Harassmap PR and Communication Coordinator, highlights how "Harassmap helps in coaching and share[ing] knowledge so

³⁷¹ Larrauri, Ouig Helena. "How technology can shape the future of peacebuilding at the local level." *Insight on Conflict*. 6 June 2014. [Online]. Available at: <<http://www.insightonconflict.org/2014/06/technology-future-peacebuilding-local-level/>>. Last accessed 21 March 2015.

that everybody can have their own map.”³⁷² Therefore, Harassmap represents a social plague that affects all women regardless of religious background. Harassmap is described as a way of doing something: “we did realise that to do something and do it well, we needed to focus on Egypt also because it [sexual harassment] is very peculiar to Egypt. We need to understand the context.”³⁷³ Although the context is often wrongly linked to Islamic extremism, Flinkman stresses how the issue per se is not as simple as one could imagine, hinting to the macho-mentality common to many cultures and not necessarily particular to Egypt or other Muslim contexts. What is however unique, is the ways in which Harassmap has chosen to raise awareness and campaigned to resolve the issue. The map in itself responds to the problem of sexual harassment, which research has shown does not discriminate between social class and level of education. In recent times, it has become an unbearable problem that has reached unprecedented proportions.

Harassmap doesn’t respond only to a social problem or an organisation that maps stories of harassment; it is the map, and sits at the intersection of digital technologies, and the social context of harassment. The map and the organisation, the stories and their digital translation, make Harassmap a project where forms of technowomen coalesce through nodes and networks that are formed online, include coding practices; social, political, and economic layers; and co-create the issue of harassment.

Google Map APIs, along with the intensive work of the open source platform Ushahidi, allow for an up-to-date reporting system that can be visually represented and easily understood. The issue of sexual harassment doesn’t find in the map and the platform a new tool. Rather on the contrary,

³⁷² Bernardi, Chiara. Interview with Noora Flinkman, Harassmap Media Projects Coordinator. 31 July 2013.

³⁷³ Bernardi, Chiara. Interview with Noora Flinkman, Media Projects Coordinator, Harassmap. 31 July 2013.

the problem of sexual harassment emerges as a complex reality through technology, corroborating the necessity to think agency in terms of redistribution across multiple and heterogeneous actants and now as metaphysically allocated in the subject.

On one level in fact, Harassmap is a website and an organisation that relentlessly tackles the social acceptability of sexual harassment. At another, it is also a place where individual reports transform into data, aggregated to become red dots on the map and, by consequence, redefine the urban space for women in Egypt. As such, code and software algorithms need to be understood as critical agents in the understanding of sexual harassment in the country with strong spatial consequences that touch upon the field of semiotics and that of geography.

As Adrian Mackenzie maintains, agency is not allocated but, rather, we assist in “permutable distributions of agency between people, machines, and contemporary symbolic environments.”³⁷⁴ This distribution—in the specific case of Harassmap—is rendered possible through code, or the ability of personal stories to become machine-readable and ‘mappable’, thus contributing to the emergence of the issue, its visibility in a visually compelling manner. The growing role of code is generating a situation where almost everything is code-written, code-readable, code-structured, and code-based.

As a result, algorithms, codes, and the “hidden stuff”³⁷⁵ of software cannot be excluded in an analysis that takes into consideration concepts of participation, identity, crowdsourcing, and production of computed cultural practices.

³⁷⁴ Mackenzie, Adrian. “Internationalization.” Fuller, Matthew (ed). *Software Studies: A Lexicon*, Cambridge, MA: MIT Press, 2008, 19.

³⁷⁵ Fuller, Matthew. “Introduction: the Stuff of Software.” Fuller, Matthew (ed). *Software Studies: A Lexicon*, Cambridge, MA: MIT University Press, 2008, 1-14.

Through Harassmap, personal stories emerge and merge with code, thus becoming a set of machine-readable data and re-emerge in the form of a human-understandable set of visual elements that can tell a story, and show places, reports, and statistics. At the same time, such a crowdsourced revolution made by technological artifacts such as Facebook posts, instant messages, pictures, and videos find space on an interactive and continuously updated online map that depends on the performativity of code. It is a complex network where technology and especially code gains agency: without it, the map and the organisation, it could be argued, would not reach such important dimensions.

Harassmap however also comes to question traditional understanding of space and geographic representation. In fact, cartography and cartographic semiotics have the common denominator of representing space and geographies “by means of a model space”.³⁷⁶ A key element of a map is the possibility to represent a position, and render a location on the map, thus projecting the space (and the shape) of what is being mapped in order to make it understandable. With Google Maps users are now accustomed to having street views, satellite views, pictures of places, as well as directions and routes. However, despite the simplicity of the interface—the map as it appears online or on mobile devices—is made up of units and relations. Units represent the characteristics of a specific location (i.e., a river or lake). These units are then organised into a system through relations (i.e., ‘closer to’, ‘above,’ etc.). In order to be understood, any map necessitates shared norms based on simplification (i.e., usually addressed as legend or key) and inclusion (i.e., a symbol of a vineyard on a map tacitly relates to an area where vineyards are present), usually entrusted to

³⁷⁶ Schlichtman, Hansgeorg, “Overview of the Semiotics of Maps. In E.J. Pratt Library. *Semiotics Encyclopedia Online*, Victoria University, 2009.

“marginal notes, especially [...] legend.”³⁷⁷ Additionally, maps make sense of geographic locations through the *topeme*, or “the smallest self-contained entry in a map”.³⁷⁸ The choice of a *topeme* constructs the geographic relevance of a specific part of a space, while potentially disregarding other aspects or fractions (addressed as minimal signs) of that specific space.

Harassmap encompasses all of these principles in its quest to report, in real time, cases of sexual harassment. Through the personal experiences of women reporting incidents, it generates ‘hot spots’, or places in Cairo (and Egypt) that women should avoid. The reports are sometimes so detailed that the map can register names of streets, numbers, and even names of establishments including shops. As a result, Harassmap is re-writing the meaning of the map and effectively altering the idea of directionality and cartography altogether. It maps—and becomes a repository of—personal stories, images, pictures, and videos as well as testimonials of people who have witnessed harassment on the street, thus redefining the purposes of a map. As Google Maps users, we are nowadays used to the ‘red-dots’ as signifiers of directionality (whether a place on a map or a starting point and a destination point); Harassmap’s ‘red dots’ are not just a case of crowdsourcing of harassment; these hot spots become places of avoidance.

Through Harassmap the concept of *technowomen* finds further corroboration. *Technowomen*, as reiterated, emerge through the complex set of negotiations and transformations that take place at the code level and intersect and intermingle with social acceptability, taboos, and the sharing of personal stories on publicly accessible platforms. In 2010, *The Guardian* defined Harassmap “a hi-tech weapon [...] unveiled in the battle against sexual harassment [...]”. Harassmap, *the Guardian* continued, “[...] allows

³⁷⁷ Schlichtman, Hansgeorg, “Overview of the Semiotics of Maps.

³⁷⁸ Schlichtman, Hansgeorg, “Overview of the Semiotics of Maps.

women to instantly report incidents of sexual harassment by sending a text message to a centralised computer."³⁷⁹

In itself, Harassmap doesn't bring about change, as the map itself is only one part of a dedicated group of people that work every day to battle sexual harassment. At the same time, Harassmap does not fall into any of the established ideas of public sphere or democratic discourses. The visual impact of Harassmap is not something that can only (or exclusively) fall into predefined theoretical frameworks. Rather, Harassmap should be looked at as something that emerges through the interaction, negotiation, and transformation of personal stories into data, and from data into human-readable 'red dots' and cases that, once 'attested,' set in motion a complex set of new, and different, negotiations, with other actants, thus further expanding the women's issues network.

Stories of harassment, and sometimes of rape, are translated into binary code where longitude and latitude encoding establish more than just the location. The coding behind the stories quantifies the stories and the cases of abuses (or violence); the stories and their translation into codes increase the size of the pointer (or the 'red-dot') in relation to and function of the number of reports filed of accidents happened in a specific location. So, whereas the pointers are usually associated with a destination or a desired location, with Harassmap the idea of the minimal sign and toponym (the dot and the street) becomes that of avoidance, a 'hot-spot' that women should avoid. But such an accrued value of the pointer, its increased numerical value in relation to and function of the filed reports, has not just technological consequences inasmuch as social and navigational consequences. This very simple element in fact reinforces the

³⁷⁹ Shenger, Jack "Women in Egypt get HighTech to beat Sexual Harassment". *The Guardian*. 19 September 2010.

Available at: <http://www.theguardian.com/world/2010/sep/19/women-egypt-sexual-harassment-harassmap>

performativity of software and its contribution to how the ‘hot spot’ on the map—emerging from a merge between personal stories and APIs—redefines the ways the city is navigated, lived in, and perceived.

This analysis and reflection therefore includes the active collection of crowdsourced information and what follows is a hard set of negotiations between many different actants. These range from Harassmap responses to the pointers (in terms of activities as an organization) to legal and psychological assistance, hashtags (#EndSH and #OpSexual Harassment) and relations with other organisations, public awareness campaigns, lobbying, and public relations strategies that are often undertaken in conjunction with the general public, government institutions, international organisations, and NGOs.

The concentration of ‘red-dots’ becomes the ‘hot spots’ that women should avoid. Harassmap is not only a node in the greater network of women’s issues in Egypt; it is itself a node and, after the analysis of how Harassmap also offers an example of how technowomen emerge. Personal stories are collected and become machine-readable data that then re-emerge in the form of accounts of harassment and locations (highlighted with varied degrees of precision); some reports contain exact names of businesses and pictures; others just include the names of the street. In both cases, the accrued value of the ‘red dots’ brings along with it a completely new way of living in urban spaces, so much so that shops are avoided, certain streets are not chosen at certain times of the day, and so forth.

At the same time, Harassmap reveals more than the map, and it expands to include several layers that touch upon the political and social acceptance of harassment and make the issue emerge as complex, opposed or accepted, a controversial topic that is met by blame, silence, lack of legal support, or opposition. Harassmap doesn’t end in the map, but it also becomes the place where technowomen coalesce. The accrued values that are shown on the map are in fact the indelible signs of stories, the activity of

the organisation in tackling the issue, and the legal and psychological assistance that stems from the reports shared on the digital map makes the complexity of technowomen emerge.

6.4 Red dots and the complex network of Harassmap

Harassmap is perhaps the best example of how technology and social interactions have been moving towards mutual endorsement where one is necessary to the other. Human agency emerges, depends and exists through technological artefacts, however ephemeral these may be as is the case with mash-ups and API integrations. Personal stories entangle and are translated into machine-readable data to then re-emerge as human-readable and understandable 'red dots.'

Looking at the map itself, it can be argued that Harassmap is based on the mapping principles of Google Maps. Google Maps is based on the polyline algorithm and on various encoding processes that are responsible for the two fundamental metrics of mapping (longitude and latitude) to be encoded in each point on the map; the polyline algorithm is also 'responsible' for the functioning of interactive elements of the map.³⁸⁰ As explained on the Google developers' page, the encoding process of the polyline algorithm "converts the binary value into a series of character codes for ASCII characters using the familiar base64 encoding scheme." Google offers an example of how an initial signed value for longitude becomes an encoded binary code, and consequently contributes to the creation of the map.

³⁸⁰ <https://developers.google.com/maps/documentation/utilities/polylinealgorithm>).

The algorithm allows the transcription (or translation) of an existing longitude and latitude point into a binary code that is then transferrable into an ASCII equivalent.

Figure 39: *Longitude Encoding Process, Google Maps*

Initial signed value	-179.9832104
Decimal value and multiply it by 1e5, rounding the result	-17998321
Convert the decimal value to binary. Note that a negative value must be calculated using its two's complement by inverting the binary value and adding one to the result	00000001 00010010 10100001 11110001 11111110 11101101 01011110 00001110 11111110 11101101 01011110 00001111
Left-shift the binary value one bit	11111101 11011010 10111100 00011110
If the original decimal value is negative, invert this encoding	00000010 00100101 01000011 11100001
Break the binary value out into 5-bit chunks (starting from the right hand side)	00001 00010 01010 10000 11111 00001
Place the 5-bit chunks into reverse order	00001 11111 10000 01010 00010 00001
OR each value with 0x20 if another bit chunk follows	100001 111111 110000 101010 100010 000001
Convert each value to decimal	33 63 48 42 34 1
Add 63 to each value	96 126 111 105 97 64
Convert each value to its ASCII equivalent	`~oia@

The overall translation allows for the creation of geo-location points on the map. Google Location APIs, alongside many other APIs Google offers, permit binary code to become user readable and usable, allowing communication between different applications. Although the development of APIs have a long history and to a great extent depend on Hypertext Transfer Protocol (HTTP), they also are increasingly using a representational state transfer (REST) architecture that offers a more direct connection to other platforms and applications. Google Maps can be personalised and enriched with content, tailored for specific uses, and new

features can be added and integrated (like the example of the BlogItalia or FourSquare).³⁸¹

At the same time, there is an important element that cannot be neglected, which is that of the organisation beyond the map, the stories and the crowdsourcing phenomenon. Harassmap is a complex case study. Beyond and through the map, the organisation emerges and moves as a node in a greater network of women's issues; at the same time and at a closer look it becomes a network that expands and extends to legislation, the application of existing penal codes and articles, self-defence courses and events, psychological support, volunteering, and art performances among other activities that include volunteers and institutions.

The legal aspect also emerges through Harasmap. Through the website and the awareness campaigns the criminalisation of harassment comes to the fore; Egypt has, in fact, provisions for arrest and prosecution for sexual harassment offenses, and recognizes harassment as a crime in articles 306, 267, and 269 of the Penal Code. However, despite an existent legal framework, few offenders have been charged, and very few women are aware of the three articles (and their amendments).³⁸²

³⁸¹ It was the first collective project of automated aggregation of Italian blogs per town, city and region (excluding the Vatican and San Marino). This project was launched in 2008 by Tony Siino, a PhD student from the University of Palermo. Available at: <http://www.blogitalia.it/mappa/>

³⁸² Article 306: "Any person who exposes another to indecent assault publicly via words, actions or gestures shall be punished by imprisonment for not less than 6 months and not exceeding 2 years, and with a fine of not less than LE 500 and not more than LE 2,000. The punishment in the preceding paragraph also applies if the indecent assault took place via telephone or by any other means of telecommunication.";

Article 269: "Any person who incites others to acts of indecency in the public way shall be punished by imprisonment for not less than 3 months. If the offender commits a similar act within 1 year from the date of final sentence for the first crime, the punishment shall be imprisonment for not less than 2 years and with a fine of not less than LE 500 and not more than LE 3,000.";

Article 267: "Any person who copulates with a female without her consent is punished by penal servitude for life or is given the death sentence. If the offender is related to the child, is responsible for the child's upbringing, has authority over the child, or is financially serving her against salary [...] penalty of penal servitude for life is inflicted."

However, sexual harassment is not solely a legal problem, and the Harassmap team continuously remarks on how the social acceptability of harassment is the real issue at stake. Bystanders that pretend not to see, or even justify, acts of sexual harassment are also approached; the stories of neglected victims or “forgiving” bystanders are reported and told on Facebook and Twitter, and on the reporting system available on the Harassmap website.³⁸³ As a result, Harassmap is a node, a network, and an example of how technowomen emerge, campaign online, but their lives and actions are rooted in the ephemeral dimension of software (as the explanation of the map itself and the Ushahidi platform), the social context, the personal experience of women (and men) who are victims of harassment, but are also linked and negotiate with the legal aspect of harassment and the ways in which the legal system does (or does not) engage with the growing issue. The Harassmap community involves the physical act of going around asking questions about cases of harassment, questions on how women are perceived and why no action is taken when unwanted attention is directed toward a woman.

Therefore, the map is a crowd-sourced experiment but it also becomes an important contribute to the multi-layer map this thesis has made use of throughout and a good way of explaining in depth how technowomen emerge out of such complexity in various forms, as stories that are then translated into coordinates on the map but also as legal cases that seek recognition and bring the issue—tackled by various organisations in the country with little results—to a new level, and also through the visually compelling story that the map itself can tell. Harassmap is therefore a node on the Egyptian women’s network and a network. It is a complex network itself that emerges online but its relevance exceeds the digital

³⁸³ For an example refer to the video “What happens when a blonde girl walks through Cairo University campus” available on the website www.oxycoms.com/clb/youtube

sphere, establishing continuous relations between the online and the offline world.

However, as in the cases of *We are all Laila* and as the Twititer analysis have suggested, Harassmap is also an archive of stories, a database of links to thoughts and events that can be lost, as in the cases of *We are all Laila*'s tweets, 'abandoned' as in the case of *#MeshSakta*, but still remain as traces of what women perceived, considered, and discussed as issues. In fact, like the blog posts and the expired links embedded in tweets for *We are all Laila*, the Harassmap reporting system serves as a source of information and also as a historical database, it contributes to the navigation of certain parts of Egypt in specific times. The map allows for an analysis that considers timelines and 'levels' of harassment, thus allowing a special rendering of harassment throughout time. It therefore helps build the narrative of sexual harassment in Egypt and acts as a repository that can be retrieved and analysed. So the question that Harassmap contributes to formulate concerns the ways in which the archived stories of sexual harassment, apart from becoming indelible parts of the Harassmap's mapping system, contribute and enrich discourses of women and gender in a middle eastern context. It could be also argued that the organization and the map also offers an element of reflection to current enquiries and interrogations on the extent of the social and political contribution of software and code.

6.5 Conclusion

Harassmap has been discussed in this chapter to enrich the two core concepts put forward by this thesis, which are that of the multi-layered and networked map and technowomen. Harassmap, as a crowdsourced map of sexual harassment and as an organization, offers the possibility of following

the intertwinement of personal stories and software, including the political, legal, and social layers. The map, the organization, and the heterogeneous actants that intervene to make Harassmap and harassment emerge have been discussed and presented as a complex and continuous negotiation where social, economic, and political layers enmesh and intertwine with personal stories, coding practices, and polyline algorithms that rewrite the urban space of Cairo and other Egyptian cities. I have discussed the ways in which the map is one of avoidance, where red dots are not indicative of directionality or location but 'hot spots' that must be avoided. The map contributes to the understanding of the issue of sexual harassment in Egypt; it is a node in the greater network of harassment as an issue that has emerged online through this thesis. The complexity of Harassmap stems from its being at the intersection of digital, social, economic, and political issues; the organisation and the map as well as the complex translation that personal stories undertake through the digital layer are demonstrated by the complexity of Harassmap, not only as a map but also as one of the many manifestations and emergences of technowomen.

Conclusion

This research has discussed and visually rendered the multiplicity of a number of women's issues as they emerge and transform through digital media in Egypt and Saudi Arabia. Through the conceptual framework of the multi-layered and networked map I have combined different methodologies, tools, and theories and the resulting complexity has been analysed. I have presented and explained the ways in which a digital investigation of women's issues in these two countries must take into consideration the complex and multiple mechanisms through which a topic or a discussion emerges and is construed as an issue, and how such issues can appear, disappear, and re-emerge on many different layers, becoming simultaneously social, economic, personal, and political.

Since the early stages of the research I highlighted the need to recognise the social and political role of digital technologies and software. The first chapter has elucidated how interdisciplinary fields of research like Software Studies are promoting new engagements with technology, stressing the sociality of software and proposing innovative ways of understanding agency as relational rather than solely allocated in the subject. On these regards, Adrian Mackenzie's idea of the distribution of agency has been put forward and used especially in my reflection on Harassmap. The scholar in fact maintains that agency is not allocated in the subject; on the contrary we now assist in "permutable distribution(s) of agency."³⁸⁴ Following this line of reasoning, this research has probed women's issues and digital media in light of the relationships established "between people, machines and contemporary symbolic environments."³⁸⁵

³⁸⁴ Mackenzie, Adrian. "Internationalization", in Fuller, Matthew, (ed). *Software Studies: A Lexicon*, Cambridge, MA: MIT Press, 2008, 19.

³⁸⁵ Mackenzie, Adrian. "Internationalization", in Fuller, Matthew, (ed). *Software Studies: A Lexicon*, Cambridge, MA: MIT Press, 2008, 19.

If it is in fact correct to argue for the recognition of the intrinsic digitisation of most of our socio-cultural practices, it is equally important to move beyond dichotomies and dualisms that either focus on women's ability to use digital media or emphasise the social and political imprint of digital technologies. Software, code, and "machines" have instead been recognised and granted some form of performativity, hence agency. I have therefore considered software an actant because able to "explicitly shaping to varying degrees how people live their lives."³⁸⁶

However, analysing a relationship between digital technologies and women's issues in a Muslim and Islamic context entails a clarification of the choice of the term issue and the acknowledgement that any digital analysis of women's issues is deeply rooted and must therefore consider the countries' locales. An analysis that focuses on women's issues in fact cannot escape "from feminist philosophies, post-colonial philosophies and anti-racist philosophies, critical theory, social theory [...]."³⁸⁷ The multi-layered and networked map has therefore critically analysed and included specific and relevant historical accounts of women's movements, campaigns, and positions in both countries, and the intertwinement between women's rights and nation building. These entanglements, I have maintained, inform and shape the multi-layered and networked map and, most importantly, contribute to a digital analysis of women's issues in Egypt and Saudi Arabia.

I have clarified also the dangers of embarking into an analysis of women's issues in these two countries and discussed how women's issues have been used as an umbrella term since the 1970s to designate and frame

³⁸⁶ Dodge, Martin and Kitchin, Rob. *Code/Space: software and everyday life*, Cambridge: MA, Massachusetts Institute of Technology, 2011. 39.

³⁸⁷ Saleri, Sara. "On nomadism. Interview with Rosi Braidotti" *Rigenerazioni*, [Online] Available at: <<http://www.euroalter.com/2010/on-nomadism-interview-with-rosi-braidotti/>>. Last accessed 20 November 2014.

specific problematic topics, coinciding with new waves of feminist research and global solidarity. However, I have built on a broad array of definitions of the issue and drawn specifically upon the concept of the issue in computing management and as proposed by Noortje Marres, specifically in relation to her reading of John Dewey's conceptualisation of the issue. The women's issues I have put forward can be temporal, pertain to the social sphere, but also emerge in many different ways, places, and through the numerous relations they create. Most importantly, they coexist on different layers. Issues such as the veil, women's education, or the driving ban and the secondary position of the woman in Islamic tradition have been followed as they emerged on different layers as central issues, central to the actors that discussed them and central in their being constituted by multiple and heterogeneous actants.

One of the strands of this research has also been to analyse each country in light of its peculiar relation with Islamic tradition and women's issues. Anthropologist Nikkie Keddie pointed out that it was only after World War II that Egypt began to be more widely recognised as Muslim and it was only with the 1971 Constitution that Egypt was explicitly addressed as Islamic.³⁸⁸ On the other hand, as chapter three presented, Saudi Arabia outlaws any other form of religious credo that is not Islamic and there is a very limited amount of literature about women belonging to other faiths. I have also elucidated how the country is subjected to codes of living and behaving that, as Keddie maintains, are inspired by the Wahhabist doctrine that proclaims an extreme reading of the Islamic Sacred Text, the Holy Qur'an, and of Holy Traditions, the Sunna.³⁸⁹

I have mapped the movements—theories and activities put forward by women, and on women, and attempted to disentangle the multiplicity of

³⁸⁸ Keddie, Nikki, R. *Women in the Middle East: past and present*, 90 and 149.

³⁸⁹ Keddie, Nikki, R. *Women in the Middle East: past and present*, 98.

topics considered 'relevant' in these two countries, trying to move "between fields."³⁹⁰ The multi-layered map has started to take shape through the discussions on the above-mentioned topics in chapters 2 and 3 of the thesis. These two chapters have been the gateway to the digital analysis of women's issues and their manifestations through and on the digital layer, and through the coalescence of human and non-human agency becomes visible, bringing to life what I have named technowomen.

Technowomen, I argue, emerge through technology and the interweaving of real life experiences and 'technicalities' of APIs, code, protocol, and fractional updates, thus permeating a new and so far underexplored field of analysis for feminist theories and women's studies in a Middle Eastern context. The idea of technowomen owes much of its formulation to Donna Haraway's cyborg but also to Wendy Harcourt's ventriloquist.³⁹¹ The concept itself points to a new and complex form of cultural production born out of the interlaced and interweaved relationship established between human and non-human agents. They are material and immaterial, tangible and intangible, visible and hidden in the "stuff of software."³⁹² The concept itself locates agency "in the middle"³⁹³ or in the relationship established between human and technology. Technowomen materialise through the intense network of relations established between human agency and technology that comprises the technicalities of software.

Technowomen has allowed an analysis of emergence and entanglement that moves an understanding of digital media and women's

³⁹⁰ Mol, Annemarie. *The Body Multiple: Ontology in Medical Practice*, 9.

³⁹¹ Harcourt, Wendy. "Cyborg Melody. An Introduction to Women on the Net (WoN)", Harcourt, Wendy (ed). *Women@Internet: Creating New Cultures in Cyberspace*, London: Zed Books, 1999. 1-20, 8.

³⁹² Fuller, Matthew. "Introduction: the Stuff of Software", Fuller, Matthew (ed). *Software Studies: a Lexicon*, 1-14.

³⁹³ Chun, Wendy Hui Kyong. *Programmed Visions: Software and Memory*, Cambridge: MA, MIT Press, 2010.

issues beyond dichotomous and dualistic understandings of how women in Egypt and Saudi Arabia use technology to empower themselves or how technology liberates women in the two countries.

Through the conceptual tool of technowomen and the multi-layered and network map, the mechanisms of emergence and the multiplicity of an issue have been traced and the digital layer has been interrogated in relation to the issues' centrality, appearance, disappearance and transformation.

These mechanisms of emergence have been rendered visually through the employment of several visualisation tools, both proprietary and freely available. In particular, I have made use of Digital Methods Initiative tools Issue Crawler and Netvizz, but also the opensource software for network visualisation Gephi, the Search Engines Research Page analyser MOZ and several other proprietary tools amongst which are Infomous and Twitonomy. These tools have been introduced in the fourth chapter, where I have also addressed some methodological issues with regard to search engines, social network theory, and hyperlink analysis. The results of the digital analysis have been discussed. The fifth chapter has in fact presented and discussed the Egyptian and Saudi Arabian issue network in terms of centrality, and prestige, and the peculiarities of each network have been highlighted.

The Egyptian issue network appeared to be made of loosely related nodes where the issue gained more prominence. By this, I mean that specific digital objects (such as videos or specific pictures but also campaigns and organised events) gained centrality—reinforcing what Jacob Moreno called the strength of weak ties. The Egyptian issue network — although rich in contradicting views and positions—made the issue of sexual harassment emerge with insistence. Saudi Arabia has instead shown a very well-connected network of users; however, the network seems to be a bit more closed than the Egyptian issue network and the issue of the

driving ban has gained more prominence. In the fifth chapter I have also showcased the emergence of technowomen through projects such as *We are all Laila* –also KolenaLaila or simply Laila- (an attempt to create a middle Eastern directory of women’s issues) and the *BussyProject*, (an Egyptian project of free theatre); I have also engaged on a discussion of the temporary dimension of women’s issues through the campaign *banmenfromsellinglingerie* in Saudi Arabia, and the analysis of Twitter campaigns #MeshSakta and #Women2Drive. The questions this thesis formulated concerned the contribution of digital media on a discussion on women’s issues in Egypt and Saudi Arabia and, in a broader sense, proposed new modes of analysis where technology and gender studies could merge without the dualisms and dichotomies that could give way to Dean’s *cyberia*. The results of the digital investigation of the Saudi Arabian and Egyptian issue networks manifested how a relational and distributed allocation of agency helps reconfigure the ways in which the relationship between technology and women can be studied. At the same time, the results have brought to the foreground new questions that could pave the way to new reflections.

The complexity of technowomen and the importance of the temporary dimension of some issues have been presented and, through the case study of Harassmap, investigated. Harassmap has served as an important case to showcase the complexity of digital media, women’s issues, and software. I have discussed how the issue of sexual harassment in Egypt is a social issue that perpetuates and re-proposes itself across multiple cultures; it sets many different agents in motion, from the ‘international community’ to the single woman who is abused and harassed on a street; at the same time, sexual harassment in Egypt comes to mean a very complex and entangled ‘mess’ that, in many different ways, assumes a new relevance on, through, and thanks to the richness of individual posts, reports, and stories about harassment, which exist only through, on, and

thanks to technology. Harassmap has emerged during my online analysis as a node in the broader context of the issue of sexual harassment, which in turn sat within the greater Egyptian women's issues network.

Harassmap, I have argued, is a node—hence part of the network of women's issues in Egypt—but it also becomes a network of relations; it lives on and through different layers. As a consequence through Harassmap sexual harassment becomes a political crowdsourced archive of personal stories of harassment; it is an assemblage of volunteers and coding practices that alter women's navigation routes within the country and sees the involvement of volunteers, women's organisations, charities, and NGOs; these intersect and exist along with personal stories, accounts of witnesses of sexual harassment, and digital artifacts. This assemblage adds complexity to an existing statistical corpus of analysis—the most relevant to date being “Cloud in Egypt's Sky”³⁹⁴ through which governments are pressured to act and tackle the issue.

The main question asked by this thesis has been about the ways in which a digital analysis of women's issues in light of the sociality of software and the computational turn of our cultural practices can change, alter, and revisit an understanding of women's issues in Egypt and Saudi Arabia. Throughout the whole project I have tried to reflect on these questions. The digital analysis has revealed a network of issues that seem to be at odds with feminist discussions on women's secondary positions in these two countries and in an Islamic and Muslim context in broader terms. Rather than recurring to dichotomies, the concept of the multi-layered and networked map helps reconfigure the issues in terms of their emergence, appearance, and disappearance across multiple layers. Although sexual harassment or the driving ban fail to emerge in feminist discussions and movements as presented in the second and third chapter, they emerge on

³⁹⁴ The Egyptian Center for Women's Rights (ECWR), *Clouds in Egypt Sky*, [Online]. Available at: < http://egypt.unfpa.org/Images/Publication/2010_03/6eeeb05a-3040-42d2-9e1c-2bd2e1ac8cac.pdf >. Last accessed 21 March 2015.

and through the digital layer, expanding the multi-layered map and altering significantly the topological conformation of the network I have traced. These processes and mechanisms of emergence and disappearance, it could be argued, corroborate the need to follow the many different actants that co-constitute the issue. However, the digital layer doesn't only contribute to a positive understanding of the multiplicity of the issue; it also helps formulate new questions such as, how can we manage the amount of software fractional updates in a timely manner and how can researchers respond to the technological changes we are currently living? More specifically, search engines are becoming semantically organised and hyperlink analysis cannot respond to these changes; of equal importance, the spread of mobile communication apps such as WhatsApp and Path, both of which discussed in chapter 5, is making communication become more personal, more intimate, complemented by the increased usage of images and videos, short texts, and content that is shared across different platforms. These changes bring to the foreground a question on the availability of information and, almost in parallel, a communication overload that must be somehow addressed. Although these questions are inherently digital, they have invested and become prominent in my investigation of the digital lives of women's issues in Egypt and Saudi Arabia. Current research on data mining, algorithm training, and general discussions on big data management (either small data or smart data)³⁹⁵ need to be somehow applied to a reflection on the ways in which technology and data combine, intertwine, and enrich current reflections on women and gender studies. I hope this work can contribute to new ways of understanding and studying women's issues in Middle Eastern countries and become a useful starting point for research in the broader context of digital media, data, and archiving practices, and women and gender studies.

³⁹⁵ Angove, Duncan. "Making big data small." *Diginomica*. [Online]. Available at: <<http://diginomica.com/2015/03/17/making-big-data-smaller/>>. Last accessed 22 March 2015.

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